Fred James
Chief Regulatory Officer
Phone: 604-623-4046
Fax: 604-623-4407
bchydroregulatorygroup@bchydro.com

January 29, 2021

Ms. Marija Tresoglavic
Acting Commission Secretary and Manager
Regulatory Support
British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Ms. Tresoglavic:

RE: British Columbia Utilities Commission (BCUC or Commission)
British Columbia Hydro and Power Authority (BC Hydro)
Meter / Meter Base Fire or High Temperature Safety Incident Semi-annual Compliance Report No. 9 – July 1, 2020 to December 31, 2020 (Report)

BC Hydro writes in compliance with Commission Order No. G-124-16 (the **Order**). The Order directs BC Hydro to provide semi-annual reporting to the Commission 30 days after June 30 and December 31 on all incidents where a meter and/or meter base is reasonably assessed to be the likely or possible source of a high temperature or fire event that results in the meter and/or meter base replacement.

This ninth Semi-annual Compliance Report provides a listing of all incidents with heat or arcing causing heat at the meter and/or meter base recorded in either the Distribution Trouble and Outage Report (**DTOR**) system or the Incident Management System (**IMS**), as well as any additional observations from the meter shop review process, for the six-month period ending December 31, 2020.

Semi-annual Compliance Report No. 9 includes an additional six incidents with signs of heat or arcing causing heat at the meter and/or meter base not considered in previous reporting periods. Attachment B includes six incidents that occurred from January 1, 2020 to June 30, 2020 with meters not received and / or reviewed by the Meter Shop in time for inclusion in Semi-annual Compliance Report No. 8.

Semi-annual Compliance Report No. 9

The DTOR system is used to record all BC Hydro trouble calls, the IMS is used to record all safety related incidents or near misses, and the field returned meter shop review process documents observations of meters returned during routine operational work orders.

There was a total of 28 incidents with heat or arcing causing heat at or around the meter and/or meter base recorded or identified between July 1, 2020 and December 31, 2020.

The table below categorizes these heat or arcing causing heat incidents based on BC Hydro's detailed review of the relevant records. Attachment A includes a listing of each incident with the corresponding meter serial number and summaries of Power Line Technician, Meter Technician, Meter Engineer, and/or Meter Shop comments.

Category	Description	Number of Incidents
Abnormal Voltage	Customer voltage is outside limits (high or low) for the service class. Example is corrosion in the meter base causes high resistance, low voltage	2
Electrical Overload	Customer load exceeds load rating of the customer's main breaker. This create overheating of customer equipment, incl. the meter base	10
Meter Base	Electrical incident caused by mechanical failure of one or more meter base components	16
Unknown	No cause for electrical incident can be identified. Further investigation may be required.	0
Total		**28**

As per previous reporting, BC Hydro attends structure fires at the request of local fire departments to shut off power, allowing first responders to safely deal with the situation. In this reporting period, the DTOR notation indicates meters were removed by a crew or consumed by the structure fire for 233 incidents. There is no indication any of these meters have been retained by Fire Investigators.

Removal of a meter follows the process where the meter is transported to the meter shop for testing and/or recycling, quarantining, or disposal. Any meters that exhibit heat or arcing causing heat at the meter and/or meter base are assessed as part of the meter shop review process and included in the applicable semi-annual compliance report.

Update on Incidents Requiring Further Investigation

In Semi-annual Compliance Report No. 7, BC Hydro reported on four incidents requiring further investigation. The investigation on one of the meters was completed and reported as part of Semi-annual Compliance Report No. 8. For three of the four incidents listed below, the meters were sent to Itron engineering for further analysis and investigation as per our evaluation procedures. BC Hydro has received Itron's results of their investigation and are provided in the table below.

Meter Serial Number	BC Hydro Observations / Comments in Report No. 7	Investigation Update
[redacted]	Heat – Post Install – Non-functioning meter exchange. Soot and loose parts inside the meter. Smoke traces appear to have originated from inside the meter. Further investigation required. Will provide an update on the investigation in a future report.	Itron engineering team further analysis concluded that the internal meter damage likely resulted from an overvoltage condition.
[redacted]	Heat – Post Install – Trouble call. Burnt meter with smoke trace inside the meter. Discoloration on the line side and load meter lugs. Further investigation required. Will provide an update on the investigation in a future report.	Itron engineering team further analysis concluded that the internal meter damage likely resulted from an overvoltage condition.
[redacted]	Heat – Post Install – Non-functioning meter exchange. No apparent damage on the meter lugs and backplate. Smoke traces on the inside cover of the meter. Further investigation required. Will provide an update on the investigation in a future report.	Itron engineering team further analysis concluded that the internal meter damage likely resulted from a failed component inside the meter.

For further information, please contact Anthea Jubb at 604-623-3545 or by email at bchydroregulatorygroup@bchydro.com.

Yours sincerely,

(for) Fred James
Chief Regulatory Officer

cu/rh

Enclosure

BC Hydro
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Meter / Meter Base Fire or High Temperature Safety Incident

Semi-Annual Compliance Report No. 9

Attachment A

Incident Listing

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Incident Listing

No.	Meter Serial Number	Category	BC Hydro Observations / Comments
1	[redacted]	Meter Base	Heat – Post Install – Meter investigation. Indications of heat discoloration on the meter lugs and meter base damage consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.
2	[redacted]	Meter Base	Arcing – Post Install – Arcing and fluctuating voltage call. Indications of arcing in the meter base consistent with loose meter base jaws. Disconnected for customer to make repairs. Electrician replaced parts in meter base. New meter installed.
3	[redacted]	Meter Base	Arcing – Post Install – Customer call, part outage. Indication of arcing in the meter base and meter damage consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.
4	[redacted]	Electrical Overload	Heat – Post Install – Trouble call. Crew observed a melted meter and burnt meter base, consistent with an overload condition. Disconnected for safety to allow for replacement of the meter base.
5	[redacted]	Electrical Overload	Heat – Post Install – Trouble call. Crew observed damaged meter and burnt meter base, consistent with an overload condition. Disconnected for safety to allow for replacement of the meter base.
6	[redacted]	Abnormal Voltage	Arcing – Post Install – Single phasing and arcing call. Abnormal voltage likely caused by single phasing of customer's load on a delta connected service. Meter base and meter burnt up consistent with abnormal voltage. New meter installed.
7	[redacted]	Electrical Overload	Heat – Post Install – While investigating the site, removed meter and crew observed meter base was burnt and meter melted consistent with an overload condition. Disconnected for customer to make repairs.
8	[redacted]	Electrical Overload	Heat – Post Install – Flicking lights call. Crew observed a melted meter and burnt meter base, consistent with an overload condition. Disconnected for safety to allow for replacement of the meter base.

No.	Meter Serial Number	Category	BC Hydro Observations / Comments
9	[redacted]	Meter Base	Heat – Post Install – Outage and wire down call. Crew observed arcing and exposed wires in the meter base. Meter is damaged and meter base burnt, consistent with loose meter base jaws. Disconnected for safety to allow for replacement of the meter base.
10	[redacted]	Meter Base	Heat – Post Install – Flickering lights call. Crew removed meter and observed overheated meter base jaws. Functioning meter. Crew was able to obtain reading from meter. Disconnected for customer to make repairs. New meter installed.
11	[redacted]	Meter Base	Heat – Post Install – Partial outage and fluctuating voltage call. Indications of meter base failure due to broken and cracked jaws and burnt meter consistent with loose meter base jaws. Disconnected for customer to replace meter base. New meter installed.
12	[redacted]	Meter Base	Heat – Post Install – Service wires low and flickering lights call. Crew observed slight melting on the meter and damaged meter base jaws consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.
13	[redacted]	Meter Base	Heat – Post Install – Trouble call. Indications of melting on meter lugs and meter base jaws consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.
14	[redacted]	Electrical Overload	Heat – Post Install – Partial outage call. Crew observed service wire melted and burnt up meter base, consistent with an overload condition. Disconnected for safety and to allow customer to replace meter base.
15	[redacted]	Meter Base	Arcing – Post Install – Partial outage call. Crew observed corrosion and arcing in the meter base consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.
16	[redacted]	Electrical Overload	Heat – Post Install – Flickering lights call. Indications of discoloration on meter lugs consistent with an overload condition. New meter installed.

No.	Meter Serial Number	Category	BC Hydro Observations / Comments
17	[redacted]	Electrical Overload	Heat – Post Install – Flickering lights call. Indications of arcing and melting on meter lugs consistent with an overload condition. New meter installed.
18	[redacted]	Electrical Overload	Heat – Post Install – Trouble call. Indication of melting in meter base and service conductor consistent with an overload condition. Disconnected for customer to make repairs and replace meter base. New meter installed.
19	[redacted]	Meter Base	Arcing – Post Install – Arcing call. Indications of arcing and heat in the meter base and burnt meter consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.
20	[redacted]	Electrical Overload	Heat – Post Install – Trouble call. Indication of heat damage in the meter base consistent with an overload condition. Disconnected for customer to make repairs. New meter installed.
21	[redacted]	Meter Base	Heat – Post Install – Meter investigation. Crew removed meter and observed one of the meter base jaws spread open and burnt marks on the meter lugs. Disconnected for customer to make repairs.
22	[redacted]	Meter Base	Heat – Post Install – Trouble call. Indications of heat discoloration in the meter base jaws consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.
23	[redacted]	Electrical Overload	Heat – Post Install – Meter investigation. Indications of heat discoloration on meter lug consistent with an overload condition. Disconnected for customer to make repairs. New meter installed.
24	[redacted]	Meter Base	Heat – Post Install – Indications of heat discoloration in the meter lugs consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.
25	[redacted]	Meter Base	Heat – Post Install – Meter investigation. Indication of heat discoloration on the meter lugs consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.

No.	Meter Serial Number	Category	BC Hydro Observations / Comments
26	[redacted]	Abnormal Voltage	Heat – Post Install – Outage call. Crew observed a melted meter and burnt meter base due to lightning strike. Disconnected for safety to allow customer to replace meter base. New meter installed.
27	[redacted]	Meter Base	Arcing – Post Install – Crew observed meter base issues to cause damages and burnt meter consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.
28	[redacted]	Meter Base	Arcing – Post Install – Trouble call. Indication of burnt meter and meter base consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.

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Meter / Meter Base Fire or High Temperature Safety Incident

Semi-Annual Compliance Report No. 9

Attachment B

Incident Listing
January 1, 2020 to June 30, 2020

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Incident Listing – January 1, 2020 to June 30, 2020

No.	Meter Serial Number	Category	BC Hydro Observations / Comments
1	[redacted]	Meter Base	Heat – Post Install – Indications of heat discoloration on the meter lugs consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.
2	[redacted]	Meter Base	Heat – Post Install – Fluctuating voltage call. Crew found meter base jaws burnt and back of meter burnt consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.
3	[redacted]	Meter Base	Heat – Post Install – Partial outage call. Crew found meter base burnt up and discoloration of meter lugs consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.
4	[redacted]	Meter Base	Heat – Post Install – Indications of heat discoloration on the meter lugs consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.
5	[redacted]	Meter Base	Heat – Post Install – During meter exchange, crew found indications of melting in the meter base consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.
6	[redacted]	Meter Base	Heat – Post Install – Indications of heat discoloration on the meter lug consistent with loose meter base jaw. Disconnected for customer to make repairs. New meter installed.