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July 30, 2019

Mr. Patrick Wruck Commission Secretary and Manager Regulatory Support British Columbia Utilities Commission Suite 410, 900 Howe Street Vancouver, BC V6Z 2N3

Dear Mr. Wruck:

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. 6 – January 1, 2019 to June 30, 2019 (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 for three years 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 sixth 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 June 30, 2019.

Semi-Annual Compliance Report No. 6

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 were a total of 29 incidents with heat or arcing causing heat at or around the meter and/or meter base recorded or identified between January 1, 2019 and June 30, 2019.

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



July 30, 2019 Mr. Patrick Wruck Commission Secretary and Manager Regulatory Support British Columbia Utilities Commission Meter / Meter Base Fire or High Temperature Safety Incident Semi-annual Compliance Report No. 6 – January 1, 2019 to June 30, 2019 (Report)

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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	1
Electrical Overload	Customer load exceeds load rating of the customer's main breaker. This create overheating of customer equipment, incl. the meter base	5
Meter Base	Electrical incident caused by mechanical failure of one or more meter base components	23
Unknown	No cause for electrical incident can be identified. Further investigation required.	0
Total		29

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 266 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.

For further information, please contact Geoff Higgins at 604-623-4121 or by email at <u>bchydroregulatorygroup@bchydro.com</u>.

Yours sincerely,

Fred James Chief Regulatory Officer

cu/rh

Enclosure

Incident Listing

No.	Meter Serial Number	Category	BC Hydro Observations / Comments
1		Meter Base	Heat – Post Install – Discoloration on two blades consistent with loose meter base jaws. Disconnected for customers to make repairs. New meter installed.
2		Meter Base	Heat – Post Install – Discoloration and indication of heat around two blades. Customer meter base damaged. Customer to contact electrician to make repairs.
3		Meter Base	Heat – Post Install – Indication of heat on and around one blade consistent with a loose meter base jaw. Disconnected for customer to make repairs to meter base. New meter installed.
4		Meter Base	Heat – Post Install – Indications of heat on the meter blades consistent with loose meter base jaws. Customer repaired meter base. New meter installed.
5		Meter Base	Heat – Post Install – Non-functioning Meter Replacement. Indication of heat on two of the four meter blades consistent with loose meter base jaws. Disconnected for customers to make repairs. New meter installed.
6		Meter Base	Heat – Post Install – Non-functioning Meter Replacement. Indication of heat on all four blades and jaws at the meter base. Signs of heat on the meter terminals. Disconnected for customer to make repairs. New meter installed.
7		Electrical Overload	Heat – Post Install – Non-functioning Meter Replacement. Discoloration and other indications of heat around the meter blades consistent with overloading. Signs of heat on the meter. Disconnected for customer to make repairs. New meter installed. Customer load remains high.
8		Electrical Overload	Heat – Post Install – Non-functioning Meter Replacement. Discoloration and other indications of heat around the meter blades consistent with overloading. Signs of heat on meter. Service identified as under size for the customer's load. Disconnected for customer to make repairs. New meter installed.
9		Electrical Overload	Heat – Post Install – Discoloration and other indications of heat around two meter blades consistent with overloading. Disconnected for customer to make repairs. New meter installed.

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

No.	Meter Serial Number	Category	BC Hydro Observations / Comments	
10		Meter Base	Heat – Post Install – Meter Exchange. Indication of heat on one of the four blades with signs of melting around the blades all consistent with a loose meter base jaw. Disconnected for customer to make repairs. Analog meter removed and new smart meter installed.	
11		Meter Base	Heat – Post Install – Non-functioning Meter Replacement. Discoloration on and around two blades consistent with loose meter base jaws. Disconnected for customer to make repairs. New meter installed.	
12		Electrical Overload	Heat – Post Install – Non-functioning Meter Replacement. Indications of heat around the meter blades consistent with overloading. Signs of heat on the meter. Disconnected for customer to make repairs. New meter installed. Customer load still remains high.	
13		Meter Base	Heat – Post Install – Meter Exchange. Discoloration on meter blade and indications of heat on meter backplate. Identified spreading on right load side jaw. Disconnected for customer to make repairs. New meter installed.	
14		Meter Base	Arcing – Post Install – Indications of arcing in the meter base due to loose meter base jaw. Disconnected for customer to make repairs. New meter installed.	
15		Meter Base	Heat – Post Install – Meter base and meter burnt. Disconnected to allow for repairs to the meter base. Electrician to notify BC Hydro when a new meter can be installed.	
16		Meter Base	Heat – Post Install – Fluctuating voltage call. Crew observed overheated meter base jaws. Functioning meter. Crew was able to obtain reading from meter. Disconnected for customer to make repairs. New meter installed.	
17		Meter Base	Heat – Post Install – Customer call indicated a problem at the meter base. Emergency service disconnect due to burning meter base.	
18		Meter Base	Heat – Post Install – Fluctuating voltage call. Indications of heat at the back of the meter. Functioning meter. Crew was able to obtain reading from meter. Customer disconnected to make repairs to meter base. New meter installed.	
19		Meter Base	Heat – Post Install – Disconnect call request due to burnt meter base. Crew observed indications of heat on the meter. Functioning meter. Crew was able to obtain reading from meter. Disconnected to allow customer to make repairs.	

No.	Meter Serial Number	Category	BC Hydro Observations / Comments	
20		Meter Base	Heat – Post Install – Disconnect call due to damage to meter base jaws. Functioning meter also removed due to heat damage to one terminal. Crew was able to obtain reading from meter. Customer disconnected to allow for repairs.	
21		Meter Base	Heat – Post Install – Fluctuating voltage call. Crew observed a burnt meter base jaw. Functioning meter. Crew was able to obtain reading from meter. Customer disconnected and advised to contact electrician to make repairs.	
22		Abnormal Voltage	Heat – Post Install – Abnormal voltage incident on the delta connected load side of a three-phase wye connected service caused the protection within the meter to expire. Meter base and meter burnt up due to incident. Further investigation is pending.	
23		Meter Base	Heat – Post Install – Fluctuating voltage call. Crew observed indications of heat on the meter from poor connection with meter base. Meter functioning. Crew was able to obtain reading from meter. Customer disconnected to allow for repairs.	
24		Meter Base	Heat – Post Install – Fluctuating voltage call. Crew observed overheated connections in the meter base. Customer advised to replace meter base.	
25		Meter Base	Heat – Post Install – Intermittent outage call. Crew observed burnt leg and melted top jaw on the meter base. Meter functioning. Crew was able to obtain reading from meter. Electrician contacted to make repairs.	
26		Electrical Overload	Heat – Post Install – Crew observed a melted meter and burnt meter base, consistent with an overload condition. Disconnected to allow for replacement of the meter base.	
27		Meter Base	Heat – Post Install – Fluctuating voltage call. Crew observed a melted meter base and meter. Meter functioning. Crew was able to obtain reading from meter. Disconnected to allow for repairs.	
28		Meter Base	Heat – Post Install – Crew observed heat on the back of the meter. Disconnected to allow for meter base repairs. New meter installed.	
29		Meter Base	Heat – Post Install – Crew observed burnt meter base and heat damage at the back of the meter. Meter functioning. Crew was able to obtain reading from meter. Disconnected to allow for repairs to meter base.	