ERICA M. HAMILTON
COMMISSION SECRETARY
Commission.Secretary@bcuc.com
web site: http://www.bcuc.com

LETTER NO. L-59-10

SIXTH FLOOR, 900 HOWE STREET, BOX 250
VANCOUVER, BC CANADA V6Z 2N3
TELEPHONE: (604) 660-4700
BC TOLL FREE: 1-800-663-1385
FACSIMILE: (604) 660-1102

Log. No. 31416

VIA EMAIL
regulatory@fortisbc.com

August 17, 2010

Mr. Dennis Swanson
Director, Regulatory Affairs
FortisBC Inc.
Suite 100 - 1975 Springfield Road
Kelowna, BC V1Y 7V7

Dear Mr. Swanson:

Re: FortisBC Inc.
Customer Complaint – Melody Farmer
Boswell Power Surge and Incident Report

This letter is in response to a group of customers in the Boswell area, represented by Melody Farmer, who filed a complaint regarding a power surge event on September 5, 2009 in the Boswell area.

The Boswell area is located along the east side of Kootenay Lake, approximately mid-way along Highway 3A between Crawford Bay and Creston. The Boswell area is supplied by a transmission line (32 Line) originally constructed in 1953. 32 Line is of a double circuit configuration consisting of a transmission circuit and an under-built distribution circuit. It parallels Highway 3A for the majority of its length due to the nature of the terrain and limited availability of alternate utility corridors above Kootenay Lake.

The event was caused by three healthy trees being[1] pulled out of the ground and falling across the overhead lines causing the 60 kV transmission system to come into contact with the 12 kV primary distribution system[2], thus creating a power surge on the 12 kV system. FortisBC stated the traditional household surge protector would become overwhelmed by this type of surge and not be able to provide the desired protection[3].

Originally, FortisBC reported that 11 of 536 customers served by Crawford Feeder 2 (CRA2) were severely affected. On May 19, 2010, FortisBC corrected the number of customers to 33 customers having sustained damage to equipment.

On April 8, 2010, the Commission issued Order L-32-10 to FortisBC requesting additional information on the use of station class surge arrestors to limit the impact of power surges. In response to a Commission Order L-32-10, FortisBC, in a letter dated July 5, 2010, submitted additional information on the monitoring of station class surge arrestors and the proper selection of surge suppression devices to be employed by the customer.

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[1] FortisBC letter dated October 6 ~~26~~, 2009 addressed to Mr. Arms, Appendix A, p.1
[2] FortisBC letter dated October 6 ~~26~~, 2009 addressed to Mr. Arms, Appendix A, p.2
[3] FortisBC letter dated October 6 ~~26~~, 2009 addressed to Mr. Arms, Appendix A, p.3

Two issues are associated with this complaint:

1. Compensation as requested by the affected customers; and

2. Safety of the electrical system and customers resulting from incidents involving transmission lines having distribution underbuild.

The Commission stated in its letter of March 10, 2010 that it does not have the jurisdiction to create an Order directing FortisBC to compensate its customers and leaves the issue of compensation to others.

With regard to the second issue, Commission staff has completed its review of the FortisBC Boswell Power Surge Incident Report filed May 17, 2010 and final comments from Ms. Melody Farmer filed June 28, 2010. During its review of these events, the Commission staff noted that there is an increasing risk of fire from surge protectors that failed, and a risk of damage to electronic equipment including hard-wired smoke alarms.

Commission Findings

The Commission accepts the Boswell Power Surge Incident Report filed by FortisBC on May 17, 2010. However, the Commission is of the view that the continued occurrence of incidents resulting in damage to customer equipment and the ongoing safety risks cannot be ignored.

Commission Directives

Having considered the risks, the Commission directs FortisBC within 90 days of the date of this letter to submit a mitigation plan that deals with the risk to its customers from future incidents involving transmission lines having distribution underbuild.

The mitigation plan should include an examination of alternatives, their costs and provide a recommended course of action to reduce or eliminate the current level of damage from incidents where transmission lines come into contact with under-built distribution lines.

In addition to an outline of actions being taken, it is expected the mitigation plan will address each of the following:

1. The application of station class surge arresters as per the attached BC Hydro report; and

2. The application of recloser pulse-closing[4] technology on transmission systems having distribution underbuild to further mitigate the impact of power surges and advise the Commission whether FortisBC believes the addition of this pulse-closing technology would be worthwhile; and.

3. The separation of the primary distribution neutral and customers' secondary neutral in multi-neutral grounded electrical systems as permitted by the National Electrical Safety Code (NESC) to further mitigate the impact of power surges as a result of recloser operation onto a shorted station class surge arrester; and

[4] Applications Assessment Of Pulse Closing Technology - A Joint Project of the Electric Power Research Institute and Hydro-Quebec http://www.sandc.com/edocs_pdfs/edoc_060671.pdf

4. The resolution, with British Columbia Safety Authority (BCSA), Underwriters Laboratories of Canada (ULC) and Canadian Standards Association (CSA), of the safe application of whole-house residential surge suppressors (similar to UL 1449, 3rd edition) and the implementation of a plan of how FortisBC intends to communicate this information to its customers; and

5. The resolution, with the BCSA and the Office of the Fire Commissioner for British Columbia, of the issue of the hard-wired residential smoke alarm functionality after a power surge.

In developing the proposed mitigation of these power surge events, the Commission acknowledges the efforts of FortisBC as well as those of Ms. Melody Farmer in coordinating the information.

Yours truly,

Erica M. Hamilton

DF/dg
Attachments
cc: Ms. Melody Farmer
Site 6, Comp 7
Boswell, BC VOB 1A0
melodick.farmer@gmail.com

Stephen Hinde
BCSA, Electrical Safety Manager
stephen.hinde@safetyauthority.ca