

1 **Q. Reference: Response to PUB-NLH-117**

2 Has Hydro considered the impact of the volume of information increases on the Energy Control
3 Centre operators and what measures are being put into place to prioritize the more granular
4 information available to ensure key system events are not missed? In the response, address
5 alarm fatigue and the additional distribution information now being presented to the operators.

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8 **A.** The granularity of information available to the Energy Control Centre (“ECC”) operators
9 (referenced in Newfoundland and Labrador Hydro’s response to PUB-NLH-117 of this
10 proceeding under the station annunciation example), allows them to provide more detail to field
11 personnel responding to the event. It does not necessarily mean there are more alarms as a
12 result of station annunciation. Alarms are grouped in the ECC and there are several points
13 coming from the field that would activate a particular alarm. The ECC can now see more of the
14 specifics around what is causing the issue and provide this information to the field personnel
15 responding.

16 It is recognized that with more new assets added to the power system, there is more equipment
17 to monitor and hence more potential for alarms. While all alarms coming into the ECC are
18 audible and must be acknowledged, this could lead to alarm fatigue and potential complacency.
19 The Newfoundland and Labrador System Operator team, in consultation with the ECC operators,
20 are continually looking to improve the alarm management process to ensure critical alarms are
21 not missed. Some examples of this are:

- 22 • Displaying critical system alarms on the mapboard for the ECC operators. These will
23 flash on and off until a particular action is taken.
- 24 • Developing situational awareness displays for the ECC operators. Displays have been
25 developed for Supervisory Control and Data Acquisition screens and displaying critical
26 information on separate monitors mounted on wall are in development.

- 1 • Making improvements to the alarm management process for reporting, logging and
2 addressing alarms. This will ensure active alarms are addressed in a timely manner.
- 3 • As new equipment is added to the power system, working with the project teams to
4 ensure only the alarms needed to monitor the asset are brought back to the ECC.
- 5 • Developing philosophies to group alarms to minimize annunciations while providing
6 reasonable specificity to direct field operations personnel.