

1 Q. Do the frequency converters at Grand Falls and Corner Brook play any role in
2 voltage control by supplying reactive power or otherwise?

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5 A. By the nature of the island interconnected system, there is ample reactive
6 power capability on the central and western portions of the system, and as a
7 result, the frequency converters play an insignificant role in voltage support
8 for these portions of the system. Furthermore, due to the geographical
9 location of the frequency converters, they play virtually no role in supporting
10 voltages on the eastern portion of the system.

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12 The central and western portions of the bulk system do experience high
13 voltages during periods of very light loads. In these instances, one of the
14 options available to Hydro for regulating system voltage is to adjust the
15 frequency converter's voltage. In practice however, the impacts of the
16 voltage regulating capability of the frequency converters is limited. For
17 example, if the Grand Falls frequency converter were to be off during
18 extremely light load cases (total utility load of around 250 MW, and no
19 industrial load), voltages on the central and western portions of the system
20 would be between 0.19% and 0.48% higher than if the Grand Falls frequency
21 converter were on. Of the measures available to Hydro to mitigate high
22 voltage conditions, use of the frequency converters to control voltages is
23 among the least significant.