

1 Q. Reference PUB-NLH-031: Has Hydro asked the HVDC converter manufacturer to
2 investigate whether HVDC OHL or ice melting operation could be accommodated in
3 the HVDC design? If yes, what would be the impact on the converter station
4 equipment, and what would be the additional cost and other impacts on the
5 converter station and what conclusions did Hydro reach? If no consideration was
6 given to this conclusion from the Manitoba Hydro Report, why not?

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9 A. Hydro has requested that the HVdc converter manufacturer, GE Grid, provide a
10 “Loop Power Mode” of operation. The purpose of this mode is to provide operating
11 flexibility of the LIL during testing and commissioning as well as provide a method
12 to reduce ice accretion on the HVdc OHL during light load conditions. The Loop
13 Power Mode will allow the operator to circulate up to rated power¹ in each pole,
14 but in opposite directions, allowing a small net power transfer to the Island
15 Interconnected System. The control system will be optimized to provide minimum
16 unbalanced ground currents under this mode of operation. While in this mode, a
17 loss of either pole shall not result in a power reversal or sudden change in power
18 being delivered to the ac system. Entering this mode of operation shall not
19 interrupt the power flow over the HVdc link. The operator shall have the ability to
20 select the power direction and power order on each pole individually.

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22 As the LIL HVdc scheme has been designed at a rated 450 MW per pole, the loop
23 power feature is an inherent mode of operation, falling within the existing
24 converter rating and does not have an impact on the overall HVdc design.

¹ Rating for reverse flow (i.e. Soldiers Pond to Muskrat Falls) is 405 MW per pole.