

1 Q. **Re: Refurbishment of Marine Terminal at the Holyrood Thermal Generating**
2 **Station (Tab 3)**

3 At page B-23 of Appendix B, it is outlined that issues with connecting and
4 disconnecting the lines from the ship can be dealt with by the ship taking on ballast
5 water. It is noted that taking on ballast water can be problematic because of the
6 cooling consequences and increase in the viscosity of the fuel being transferred.
7 Will this concern be ameliorated with Hydro's application to replace the entirety of
8 the fuel oil heat tracing at the Holyrood Thermal Generating Station?

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11 A. Hydro's application to replace the entirety of the fuel oil heat tracing at the
12 Holyrood Thermal Generating Station will not resolve this concern. The intake of
13 ballast water cools the fuel oil contained within the vessel holding tanks. This
14 results in a higher viscosity and, consequently, slower flow rates when pumping
15 from the vessel to the Holyrood piping network.

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17 The proposed increase in height to the existing loading arms, referred to on page
18 B24, will mitigate this issue by altering the loading arm's operating range, thereby,
19 reducing the number of instances in which ballasting of the vessels is required.
20 Thus, while the heat tracing work will assist with fuel conveyance on land, the
21 Marine Terminal work will assist with fuel conveyance from ship to shore.