Q. **Tab D – Projects over $200,000 and Less Than $500,000: p. D-292 – Replace Human Machine Interface**

Please outline the "minor loss of control and inaccurate alarming on new installations" for the existing HMI referred to by Hydro at p. D-293, including when the issues occurred and how the issues were rectified.

A. An example of this "minor loss of control and inaccurate alarming on new installations" occurred during the Arc Flash Remediation project at the Port Hope Simpson site in 2014. The Arc Flash Remediation project is in place to reduce, whenever possible, arc flash ratings to Arc Flash HRC 2 or lower, in compliance with the Canadian Standards Association Z462-08 standard. The Port Hope Simpson site has a HMI system which is obsolete.

During the project, a new relay was installed which added such features as under and over voltage tripping and under frequency alarms. Due to the level of obsolescence of the HMI, the project team was unable to add these new alarms to the screens and in the program. This issue was rectified by tying the signal for these alarms into an existing alarm for overcurrent and by notifying the operators that the HMI screen was no longer accurate and that the overcurrent alarm could mean several different alarms (hence the inaccurate alarming situation). As well, this situation described above will be similar for any project, such as Arc Flash Remediation, that requires interfacing to obsolete HMI systems. As a result, this problem is not unique to Port Hope Simpson.