Re: 2009 Capital Budgets: Multi-Year Projects p. C-37 - Hinds Lake Intake Upgrade

Q. At page C-37, NLH states that the Project Description for the Upgrade of the Intake of Hinds Lake Gate Structures is as follows;

"This project is required to upgrade the electrical controls at the Hinds Lake intake gate. The new system will use a programmable logic controller (PLC) with a cable reel sensor to precisely control the position of the current intake gate. This system will offer accurate gate position feedback. A backup penstock-priming device will also be employed to address all safety concerns arising from filling the penstock after partial or complete dewatering."

a) How many of NLH's hydro generating stations currently employ PLC's with cable reel sensors?

b) Does each intake gate in each station employ a PLC with cable reel sensors?

A. a) Of Hydro's nine hydro generating stations, only the one at Bay d'Espoir employs a PLC equipped with a cable reel sensor to provide accurate gate position control. This system was installed on Bay d'Espoir Intake 4 in July of this year as part of Hydro's 2008 capital plan. Granite Canal, Hydro's newest hydro generating station built in 2003, uses a similar cable reel sensor in conjunction with an electronic field controller which is a device similar to a PLC. This provides gate position indication only and is not used to provide accurate gate position control.

b) Only Bay d'Espoir Intake 4 has a gate position control system that uses a PLC equipped with a cable reel sensor. This capital proposal is the second of a four year program to upgrade six out of the eleven intake structures within Hydro's hydro generation system to a more accurate gate positioning system. These six structures have been identified as having safety hazards. Future plans will include a similar installation on all intake structures throughout the system. In the interim, operators have been directed to take special care when operating gates.