

**New Chelsea Hydro Plant Refurbishment, Schedule B, page 12-13 (\$3,973,000)**

**Q. Is the existing protection and control equipment at the New Chelsea hydro plant maintainable? If not, why not?**

A. It is Newfoundland Power's position that to continue to maintain the 48-year-old protection and control equipment at New Chelsea plant is not consistent with the requirement for providing reliable and cost effective operation of this facility.

The Woodward governor is no longer under active support from the manufacturer. The manufacturer was committed to maintain "some" spare parts until May 2003, and is prepared to machine new parts in special circumstances until 2008. However, the high cost associated with these machined parts make it difficult to justify repairing the unit when compared with the replacement cost. Therefore, the only option to extend the life of the governor is to purchase scavenged parts from resellers. It has been Newfoundland Power's experience that scavenged parts have very short life expectancy when they are reinstalled in an existing governor.

Newfoundland Power has only two employees currently with the expertise necessary to repair the old electromechanical relays. Parts necessary to repair these relays must come from scavenged relays that have been replaced by newer technology. There is very little availability of surplus relays required for generator protection in Newfoundland Power's stock. Therefore, depending upon which component fails Newfoundland Power may not be able to maintain all of the existing electromechanical relays.

Considering these points, the maintenance of the existing protection and control equipment, while likely technically feasible for a short period of time would not provide reliable and cost effective operation of the plant. The 2004 replacement of the other major components in the plant and substation will require significant integration with the old protection and control equipment. This work would become redundant when the old protection and control equipment were to be replaced at a later date.