

British Columbia Utilities Commission Information Request No. 1.43.5 Dated: April 13, 2005 British Columbia Hydro & Power Authority Response issued April 29, 2005	Page 1
British Columbia Hydro & Power Authority 2005 Resource Expenditure and Acquisition Plan ("REAP")	

43.0 Reference: 2005 REAP, p. 3-35, 3-37, p. 3-39 Mica G1 to G4 Exciter Replacement, Governor Replacement

BC Hydro describes these programs as part of a 10-year maintenance strategy to proactively replace critical components before they completely fail.

1.43.5 What is the life expectancy of the new governor control systems?

RESPONSE:

Governors for hydro-electric generators have 2 major systems:

- **the electronic control system which senses unit speed and loading and controls the hydraulic system; and**
- **the hydraulic system that provides the mechanical control of the equipment that adjusts the flow of water.**

The current trend is for electronic equipment to have an ever-shortening life, due to advances in technology and manufacturers limited support for parts and warranty. The new governor electronic control system is estimated to have a life of 15 to 20 years.

The hydraulic system is expected to have a life of 30 to 40 years, similar to the existing equipment.