John Day Governor Upgrade

Governor upgrades are a regional priority for the Corps of Engineers, arising from a 2000 study that recommended a comprehensive upgrade program. The Capital Work Group has approved a series of governor upgrade projects and a regional contract has been negotiated for supply and installation of the upgrades.

The governors being upgraded are the original Woodward design. While they are functional and meet minimum operating standards they are now 45 years old and require continual annual maintenance on the pilot valve and other mechanical subsystems. The upgrade will replace many components of the existing governors, including the aging and difficult to maintain 3d Cam systems. The aging systems are becoming more difficult to maintain due to lack of availability of parts and cumbersome user interfaces.

The governor upgrades will improve reliability and will counteract the increasing potential for governor failure that could cause forced outages. New digital governors will allow more stable and fine control of the turbine/generator units. This will provide efficiency improvements that will benefit plant generation and help meet BiOp operating requirements. The installation of digital controls will allow for smoother synchronization of the generators and reduce instantaneous torque changes to the rotor when the unit is placed online. Benefits of the digital governor installation also include more precise load delivery ramping. Secure governor communication with the control room will also result from the upgrades.

There are a number of benefits associated with replacing the governors now while the regional governor contract is in place. By grouping multiple regional projects into one contract, cost savings accrue as individual upgrade projects realize the value of the collectively negotiated contract. The regional contract allows for standardization of governor equipment across the region. That provides benefits in training efficiency, skills transfer and spare parts inventory.