

Control Replacement – COI Series Capacitors

This project will replace the obsolete and unserviceable protection and control systems for the series capacitor banks at Sand Springs, Fort Rock, Sycan, Captain Jack and Alvey. The installation of modern digital systems will complete the modernization and standardization of the California-Oregon Intertie (COI) protection and control systems. The objective of the project is to increase the reliability and availability of the COI. This project parallels projects being completed by other COI owners to replace their equipment of a similar vintage.

These series capacitor banks are equipped with FM/analog protection and control systems. These control systems have not been manufactured for over 15 years and are no longer supported by General Electric as the manufacturer has moved to digital systems. For the last several years, key components of the FM/analog system, particularly power supplies, transmitter boards, fiber optic cables, and signal columns have experienced repeated failures disabling the system and controllers. Because the boards and their components are no longer manufactured, spare parts are in critically short supply. As a result, continued maintenance is very difficult and repeated failures may lead to long term COI capacity reductions.

The project will also upgrade the SCADA remote terminal unit (RTU), sequential event recorder and fiber optic transfer tripp (FOTT) at Sand Springs, Fort Rock and Sycan. The present schemes have had serious problems including power supply failures. The new SCADA RTU is capable of providing two way communications between the sites, eliminating the need for a repeater. The FOTT will be replaced to enable line tripping in the event of serious capacitor bank problems or faults.