

Lower Granite DC System and LV Switchgear Upgrade

The station service DC systems, governor oil pump system, and low voltage switchgear are original equipment and have been in service for over 43 years. These assets perform a variety of functions:

- The DC assets are part of the DC and Preferred AC System which supplies power for critical plant and life safety loads including protective devices for generators and transformers, breaker controls, etc.
- The governor oil pump system is part of the governor system that controls generating unit speed and load.
- The low voltage switchgear provides power to the electrical distribution systems which power station air compressors, lighting, heat pumps, drainage pumps, bridge cranes, etc.

The assets being replaced have significantly exceeded their useful service lives. In addition to replacing aging assets, this project addresses a number of deficiencies. The new design corrects an operational issue inherent with the daisy-chained original configuration. This will eliminate the need to do live work, or alternatively, to shut down multiple units to do work. The new design will also provide redundancy that is lacking today. The new switchgear and breakers will improve employee arc flash protection. The project also includes installation of a new battery monitoring system that will eliminate monthly monitoring requirements and provide a portable load bank with connections that will make battery load tests easier and safer.