Bonneville Powerhouse 2 Station Service Replacement

This project will upgrade the station service for the second powerhouse at Bonneville by installing new switchgear and transformers, replacing the substation transformers with higher capacity units, replacing the 13.8kV source and load feeders and adding solid state relaying.

The station service equipment provides power for the operation of all of the powerhouse electrical equipment and systems, including the eight main unit generators and two fish-water generator units. The reliability and adequacy of the equipment is critical for the operation of the generators. The current station service equipment is in substandard condition. In addition, the capacity of the station service equipment is marginal in serving existing load and provides no allowance for future load growth. If any one of the three existing distribution transformers fail or are taken out of service for maintenance, loads at the powerhouse must be managed to avoid overloading the remaining two transformers and buses.

Replacing the station service equipment will:

- Meet increasing load demand due to component upgrades and additional power demands for monitoring and sampling fish, HVAC equipment for powerhouse cooling, and other electrical equipment, including monitors and control devices.
- Increase protection reliability with the addition of solid state relaying, which will provide a more reliable tripping scheme for station service loads.
- Reduce workload by the reduction of hours needed to maintain existing relaying and aging switchgear components.
- Reduce unscheduled repairs and outages due to equipment failure.