

# Hydroelectric facility upgrades by rehabilitating major equipment

### Location:

United States

# Segment:

Hydroelectric

# Problem:

Electrical gear obsolete and in poor condition

## Solution:

Upgrade and rehabilitate the electrical distribution system

## Results:

Equipment upgrade, two substations and utility coordination

# **Project Overview**

The generation facility consists of eight turbine generators that generate at 4160V.

Eaton was selected to provide a new electrical infrastructure for the plant which had not been in operation for 14 years.

# **Project Highlights**

- · Design-build project
- · Relay protection package
- 4.16-13.8kV substation
- Utility interconnection substation 4.2 miles from plant
- · New arc resistant switchgear
- New AC station service system
- DC system and battery
- · High resistance grounding
- Revenue metering
- · All new cabling and bus work
- Generator step up transformer

- Two MCC's
- · Fire detection system
- · Security system
- All new lighting for two powerhouses and outdoor substations
- Short circuit and load flow studies
- · Arc flash analysis
- Test and commission all systems
- Provide operator and maintenance training
- Drawing package and O&M manuals

