



# Hydro generation facility undergoes a successful upgrade

**Location:**

United States

**Segment:**

Hydroelectric

**Problem:**

Obsolete control system

**Solution:**

Hydroelectric controls upgrade

**Results:**

Replacement of many of the control systems while keeping the main infrastructure in place.

**Project Overview**

This hydro generation facility consists of a single, 2750kVA horizontal turbine generator that generates at 6.6kV.

The objective of this turnkey project was to upgrade the generation protection and control systems, automate the facility, provide remote operation from central dispatch, improve asset protection and increase reliability. This project consisted of replacing many of the control systems while keeping the main infrastructure in place.

Eaton's complete overhaul of the controls systems enhances the ability of the utility to remotely monitor the condition and status of the generating plant. Resulting in faster response times to plant issues and greatly shortened start-up and shut-down times.

**Project Highlights**

- Design-build project
- Relay protection package
- PLC control, annunciation and HMI systems
- New static exciter
- Replace hydraulic controls
- Trending and alarming
- Water level management controls
- Automatic synchronizing
- Remote SCADA monitoring
- Field instrumentation upgrades
- Automated brakes
- Bearing temperature monitoring
- All new cables and raceways
- Head and tail-water instrumentation
- New static excitation system
- High resistance grounding system
- Test and commission all systems
- Provide operator and maintenance training
- Complete drawing package and O&M manuals



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