



Hydro facility upgrades its generation protection and control systems.

Location:

North America

Segment:

Hydroelectric

Problem:

Obsolete Control System

Solution:

Hydroelectric controls upgrade

Results:

Equipment upgrade, automated system and utility coordination.

Project Overview

The hydro generation facility consists of a two, 9500kW Capline bulb turbine generators that generate at 4160V.

The objective of this turnkey project was to upgrade the generation protection and control systems, automate the facility, provide remote operation from central dispatch and improve asset protection to 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
- Extensive exciter rebuilds of two analog Westinghouse excitation systems
- Replace hydraulic controls on existing Woodward Governors
- Trending and alarming water level management controls
- Gate and blade control
- Convert Cam-Curve to PLC control
- Automatic synchronizing
- Remote SCADA monitoring
- Field instrumentation upgrades
- Automated brakes
- Bearing temperature monitoring
- All new cables and raceways
- Rubber dam automation
- Head and tail-water Instrumentation
- Test and commission all systems
- Provide operator and maintenance training
- Complete drawing package and O&M manuals



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