

PROTECTION . CONTROL . AUTOMATION SOLUTIONS FOR POWER GENERATION



Casco
SYSTEMS

Engineering
Protection
Control
Integration
Automation

The Control & Automation Solutions Company



ENGINEERING SERVICES

- PLANT AUTOMATION
- SUBSTATION INTEGRATION
- ADVANCED CONTROL SYSTEMS

- RELAY APPLICATION ANALYSIS
- PROTECTIVE RELAY SETTINGS
- PROTECTION & CONTROL

- ELECTRICAL DESIGN
- CONCEPTUAL DESIGN
- SCOPE DEVELOPMENT
- SPECIFICATION DEVELOPMENT
- INTERCONNECTION CONSULTING

- PROJECT MANAGEMENT
- CONSTRUCTION SUPPORT
- COMMISSIONING
- TURN-KEY SYSTEMS



PROVIDING ENGINEERING RESOURCES YOU NEED TO COMPLETE PROTECTION, CONTROL, AUTOMATION & INTEGRATION PROJECTS

Casco Systems is an engineering and system integration firm focused exclusively on the power generation and delivery markets.

Founded in 2001 to provide Control and Automation Solutions, CASCO has expanded to offer integration, automation, communication, protection and control systems to clients in the electric power industry throughout North America.

Our team of engineers and integration specialists are focused exclusively on providing technology solutions that are reliable, functional and cost effective. We bring an understanding of the demanding requirements necessary in utility grade protection and automation systems to every project, along with the desire to assist clients maximize return on their technology investment.

TECHNOLOGY CONSULTING FROM EXPERIENCED DOMAIN EXPERTS IN THE POWER TRANSMISSION & GENERATION INDUSTRY

Our team offers experience with a wide variety of platforms typically found in the power generation and transmission industry. In addition our domain knowledge allows us to implement secure and reliable systems in a safe & efficient manner.

We offer experience with the following technology and products:

- Protection & Control (P&C) Engineering
- Protective Relay Setting Development
- Supervisory Control & Data Acquisition (SCADA) Configuration
- Human Machine Interface (HMI) Design
- Remote Terminal Unit (RTU) Programming
- Programmable Logic Controller (PLC) Design & Programming
- Network Design & Configuration
- Cyber Security Systems & Planning

A TRUSTED PARTNER INVESTED IN YOUR SUCCESS

Casco Systems has built a reputation as a trusted partner to a range of owners, operators and service providers across the industry. Our resources, knowledgebase, commitment to success, and work ethic have allowed us to enjoy decades long relationships with multiple client partners. We look forward to enjoying long term relationships with each client by delivering certainty to each and every project.

POWER PLANT AUTOMATION

From Water to Wire, Casco Systems has the experience to assist owner / operators automate their facilities to maximize production while meeting environmental, regulatory, safety and financial obligations.

We specialize in the protection, automation and control of hydroelectric stations, water flow & level regulating facilities, power plants, utility interconnect substations, and balance of plant equipment.

The engineering & integration professionals at Casco Systems have automated many plants including automatic start & stop sequences, protective relaying, water level management, equipment condition monitoring, and regulatory compliance & reporting.

Put our experience to work for you!



RELIABLE POWER PLANT AUTOMATION, PROTECTION & CONTROL

Our team of engineering and integration professionals has completed projects at many hydro, wind, solar, fossil and biomass generating plants across the US & Canada. The knowledge gained and lessons learned include experience with the following:

- Francis, Kaplan, and Pelton Turbines
- Pumped Storage Control
- Wind Farm Integration
- Rubber Dam Automation
- Minimum Flow, Taintor, & Bascule Gate Control
- Governor Upgrades and Replacements
- Protection & Control Systems
- Power Distribution & Balance of Plant Systems
- Plant Automation & Integration Systems

EXPERIENCE THAT COUNTS!

Casco Systems specializes in the automation, protection, and optimization of hydroelectric stations, wind farms, power plants and substations. A select sample of the many stations, generators, water control structures, fish passages, and related projects we have successfully completed is noted below.

- ◆ Black River Multi-Plant Hydro Automation
- ◆ Lower Barker Hydro Automation
- ◆ Pittsfield Hydro Automation
- ◆ Pittsfield & Benton Falls Fish Lifts Automation
- ◆ Old Falls and New Dam Hydro Automation
- ◆ Gardiner Hydro Automation
- ◆ Hailesboro #4 Hydro Automation
- ◆ Bishop's Falls Hydro Station Automation / Governor
- ◆ Lockwood Hydro Electronic Actuator Control
- ◆ Skelton Hydro Fish Elevator Automation
- ◆ Tinker Hydro Diesel Unit Control System
- ◆ Lamoille River Control Center & Plant Automation
- ◆ Cosgrove Hydro Station, Commissioning Support
- ◆ Milton Hydro Station, Automation Programming
- ◆ Lockwood Hydro Electronic Actuator Control Design
- ◆ Messalonskee Stream Complex Automation
- ◆ Middlebury Lower Hydro Automation
- ◆ Weybridge Hydro Station Automation
- ◆ Lewiston Pumped Storage HMI & PLC Programming
- ◆ Global Control Room SCADA Project Support
- ◆ Cherokee Falls Governor Upgrade
- ◆ Copenhagen Hydro Station Automation
- ◆ Essex No. 19 Station Automation
- ◆ Pumpkin Hill Hydro Station Automation



simplifying Integration, Protection & Control



GENERATOR PROTECTION & AUTOMATION

We have performed automation, integration and protection upgrades at over 100 new and existing power plants. Our projects often involve one or more of the following:

- Plant Automation & Integration Systems
- Local HMI & SCADA Platforms
- Governor Upgrades and Replacements
- Protection & Control Packages
- Utility Interconnection & Communication Interfaces



FISH PASSAGE MONITORING & CONTROL

Casco Systems has automated multiple fish passage facilities including fully automatic, unattended fish elevator and attraction systems. We have experience programming and designing electrical controls for:

- Fish Elevator Automation
- Fish Attraction Flow Control
- Downstream Flow & Level Management
- Regulatory Reporting & Data Logging



SCADA SYSTEMS & REMOTE TERMINAL UNITS

Casco regularly develops Supervisory Control and Data Acquisition Systems and provides field equipment to perform remote telemetry.

- SCADA System Design & Programming
- Data Concentrator & Remote Terminal Unit Configuration
- Remote Monitoring Systems
- Automated Alarm Notification Systems



WATER LEVEL & FLOW MANAGEMENT

Today's licensing and regulatory environment places increasing demands on the owner/operator of any power plant. We have been assisting our clients meet or exceed these requirements for over a decade. Our staff has designed systems to help clients monitor, control and document regulatory compliance, sample projects have included:

- Rubber Dams, Automation & Control
- Minimum Flow Valve, Taintor, and Bascule Gate Control
- Water Level Management Systems
- Downstream Minimum Flow Control & Reporting

HUMAN MACHINE INTERFACE DESIGN

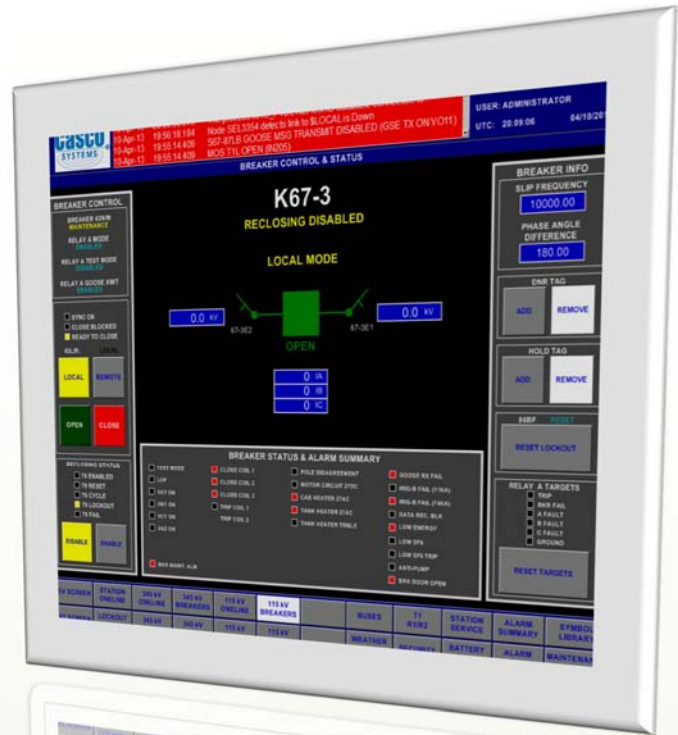
Designed with the user in mind, we have developed a standard approach to station automation that allows Casco to deliver a familiar and consistent user interface across multiple facilities including power plants and substations.

Our platform uses “off the shelf” products and is highly adaptable, allowing full customization to meet the unique requirements of your facility.

A clear, well organized and intuitive user interface is the only way to safely operate a plant while minimizing training and engineering support costs.

The Casco engineering team will customize every system to your exact specifications by leveraging our experience with GE CIMPLICITY, WonderWare InTouch, and Proficy iFix software. We have implemented easy to use HMI systems in conjunction with a wide range of control, monitoring, and data acquisition hardware.

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- ◆ **ENGINEERING**
- ◆ **PROTECTION**
- ◆ **INTEGRATION**
- ◆ **COMMISSIONING**
- ◆ **TRANSMISSION**
- ◆ **GENERATION**
- ◆ **TURNKEY SYSTEMS**
- ◆ **TECHNICAL SUPPORT**

Casco Systems is committed to helping our clients leverage the latest advances in technology to efficiently and reliably operate today's Smart Grid applications.

Apply our experience on your next project and see why the "Control and Automation Solutions Company" has gained a reputation for excellence.

Contact Kevin Mahoney at 207-712-0590 or by email at kevin@casco-systems.com to discuss how we can help you



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