Meeting today’s challenges

Today’s rapid advances in protection and control technology present both opportunities and challenges to electric power system owners.

Expanded functionality, increased reliability, simplified panels and lower costs are the opportunities. The challenge? Choosing from a daunting array of options.

POWER Engineers is here to help. We combine expertise in historic, present-day and emerging technologies with a firsthand knowledge of power systems design and operation. The results are system-specific solutions that maximize the power of today’s available technologies.

Our unique approach

- Client-tailored solutions – We carefully tailor our engineering to client needs while implementing best design practices.

- Multi-discipline perspective – Our one-team project approach brings internal experts together for opportunity analysis, system design, and implementation.

- Independent multi-platform experience – We have substantial experience using every major hardware and software platform and every major integration protocol for substation protection and control. Our independence allows us to recommend latest-in-class solutions regardless of vendor.
**Project Highlights**

**345/115 kV Relay Settings & SCADA Design, New Hampshire**
Protective relay settings and SCADA design for transformer additions at the 345 kV and 115 kV Scobie Pond substations. Using the latest microprocessor relays, we provided transformer, bus, line, and breaker failure protection, SCADA and automation system design and installation, and commissioning support. The system is the first of its kind for Public Service of NH, providing a local HMI and connection to the system master station.

**Wind Farm Relay Settings, Texas**
For multiple projects for the same client, we calculated and documented protective relay settings based on the client’s relay coordination study. Programmed support for substation control and data acquisition per the Horizon Wind Energy standard enterprise SCADA data map, PPA and/or QSE data map, and local HMI data map. Protective relays were provided for 34.5 kV switchgear, 345/34.5 kV transformer, 345 kV line, and a 34.5 kV capacitor bank.

**Coordination Study & Upgrade, California**
Comprehensive protective relay coordination study involving a 65 MW geothermal power plant and its associated 21 kV distribution line and plant auxiliary systems, including design for the upgrade of plant protection to microprocessor relays.

**Arc Flash Hazard Analysis, Wisconsin**
For Enbridge Energy, arc flash studies at 52 crude oil pumping stations in 10 states to minimize fault clearing times and reduce the risk of arc flash hazards.

**Generator & Transformer Protection Upgrade, California**
Supplied EasiLinc protection modules for efficient upgrade of generator and transformer protection at US Bureau of Reclamation’s Folsom Dam. Project was featured in *Transmission & Distribution World* magazine.

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