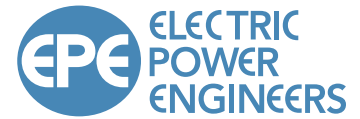


Protection & Controls Engineering Services



Ensuring the Safety and Reliability of Your Energy Projects

Electric Power Engineer's (EPE) team of technical experts, including designers, engineers, and compliance consultants, knows that safeguarding your electrical infrastructure is vital. Our comprehensive suite of Protection & Controls (P&C) Engineering Services offers an integrated approach to ensure the safety, reliability, and efficiency of your energy projects. From carefully developed protection designs and equipment specifications to advanced protection studies and thorough commissioning processes, our services are tailored to meet the unique needs of your project. Trust EPE with your P&C project.

PROTECTION DESIGN

P&C Drawings

- Cover Page Drawings
- Single Line Drawings
- Three-Lines
- AC Schematics
- DC Schematics
- Relay Logic Diagrams
- Communication Drawings
- Protection Panel Drawings
- Wiring Block Diagrams
- Bill of Materials

Equipment Specification

- Relays
- Fuses
- Circuit Breakers
- Meters
- Controllers
- CTs and PTs
- Grounding Banks
- Grounding Devices
- Test Switches

PROTECTION STUDIES

- Protection Model Development Using ASPEN, ETAP, EasyPower, CYME, SKM, WindMil, PSCAD, etc.
- Short Circuit and Breaker Duty Analysis
- Overcurrent Protection Settings and Coordination
- Voltage and Frequency Protection Settings and Coordination
- Distance Protection Settings and Coordination
- Bus, Generator, Line, and Transformer Differential Protection Settings
- Complimentary Interconnection Protection Settings
- Arc Flash Analysis and Labels
- GPR and Grounding Grid Studies Using ETAP, WinIGS
- Protection Reliability Assessment Studies
- Effective Grounding and TOV Analysis

- NERC PRC studies (PRC-019, -024, -025, -026, -027)
- Protection Philosophy Document (PPD)

COMMISSIONING

- Bidding Process
- Bid Evaluation
 - Technical
 - Economical
- Cost Estimates (25%, 15%, 5%)
- Relay Setting Files (SEL, GE, MiCOM, EATON, ABB)
- Communication Files
- RTAC Setting Files
- SCADA Data Concentration
- SCADA HMI

POST-DELIVERY SUPPORT

- Field Events Analysis
- Root Cause Analysis
- Equipment Failure Analysis
- NERC PRC Compliance Review and Renewal (PRC-019, PRC-024, PRC-025, PRC-026, PRC-027)

Addressing the Unique Needs of Your Industry Through Insight and Innovation

UTILITIES AND POWER DELIVERY

Increase efficiency and ensure accuracy by leveraging detail-driven consultants to perform power system studies and guide strategic future-focused decisions across grid modernization and transmission and distribution (T&D) planning to continue to serve electric consumers reliably and economically.

POWER GENERATION AND RENEWABLES

Gain high-quality project development and interconnection process support with a team of power generation consultants who are highly experienced in tasks including technical, economic, and feasibility studies, plant modeling and project design, market analysis, and site selection.

DISTRIBUTED ENERGY RESOURCES

Plan, study, and design DER and demand flexibility programs and strategies for electric networks that incorporate grid modernization and systems integration, T&D planning, and interconnection while accounting for customer needs and experience, navigating regulatory, technical, and policy requirements, and ensuring compliance. We empower our clients to optimize their distribution systems in an evolving environment.

ENERGY STORAGE

Achieve maximum results and ensure accuracy by depending on our full-service approach and client-centric team to assess and manage the complexities of storage projects, including program development, non-wires analyses, interconnection and market studies, and sizing optimization.

COMMERCIAL AND INDUSTRIAL

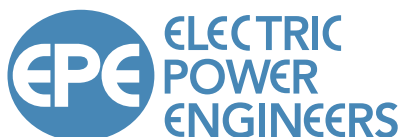
Reach sustainability and clean energy goals while reducing costs by turning to a team of power and energy experts to drive project development, lead modernization initiatives, and implement forward-thinking technologies and solutions.

GOVERNMENTS AND UNIVERSITIES

Drive key initiatives, including grid modernization, and interconnection, while maximizing resources. Benefit from our extensive experience in regulatory spaces and with government entities, exemplified by our guidance on policy and ratemaking decisions for public utilities commissions, collaborative research efforts, federal grants, and expertise in T&D planning. Partner with us to lead the way in driving innovation and policy guidance for a brighter energy future.

CONTACT US TO LEARN MORE ABOUT AN EPE PARTNERSHIP TODAY

contact@epeconsulting.com | 512.382.6700 | EPEConsulting.com



Electric Power Engineers, LLC (EPE) partners with power and energy clients across the globe to address complex engineering and grid modeling challenges, bridge gaps, and design and develop the grid of the future. Offering comprehensive services and proprietary solutions, our client-centric consultants deliver unmatched expertise and results by treating each project as if it were their own.