



PRAETORIAN

POWER PROTECTION, LLC

ENGINEERING

Praetorian Power Protection, LLC specializes in modeling power systems to develop comprehensive studies designed to enhance the reliability and safety of your power distribution backbone. Our team of experienced electrical engineers deliver custom tailored solutions for any voltage class, including engineered short-circuit analysis, protective device coordination, and arc flash studies; each providing critical insights to ensure the continuity, safety, and reliability of your electrical operations. We Also perform complex turnkey retrofit design and relay file development, enhancing your critical power path, improving safety and efficiency, while simultaneously minimizing downtime. Partner with Praetorian Power to safeguard your operations and ensure compliance with all regulations while maximizing the performance of your electrical infrastructure.

SERVICES OFFERED

SCCAF POWER SYSTEM STUDIES

- **Short-Circuit Analysis.** Understanding and quantifying prospective fault currents is essential for safeguarding your equipment and personnel. Our short-circuit analysis ensures that your system is adequately designed and rated to handle the most severe electrical events or faults.
- **Protective Device Coordination.** We assess and fine-tune the settings of circuit breakers and relays to ensure they operate in harmony, minimizing your system's exposure to destructive faults while maintaining electrical service to unaffected infrastructure.
- **Arc Flash Study.** The risks associated with exposure to arc-flash incidents can be severe; leading to injuries, death, outages, and costly damage to equipment. We evaluate your electrical systems at every point along the power path to determine the potential arc-flash hazards, allowing us to implement safety measures that protect your workforce and comply with IEEE, NFPA, and OSHA industry standards. NFPA standards stipulate an arc-flash study be performed every 5 years, or whenever modifications are made to the power system.

POWER QUALITY ANALYSIS

Power quality is integral for today's business and industrial operations. A degradation in power quality can result in downtime, equipment damage, utility penalties, and oversized distribution equipment. Through diagnostic tools, our engineering group can monitor, identify, and resolve issues associated with voltage fluctuations, harmonics, asymmetry, transients, and more. This helps to balance your power system, increase energy efficiency, reduce wear on equipment, and enhance system reliability.

RELAY PROTECTION DESIGN OR UPGRADE

Protective relays serve as the backbone of your medium voltage protection. Our protective relay solutions are designed to identify, respond, and isolate destructive electrical faults. This prevents costly damage to your critical infrastructure while simultaneously minimizing downtime. At Praetorian, we utilize advanced simulation tools to model an array of fault scenarios and validate the performance of your custom designed relay package. We focus on delivering comprehensive relay solutions that protect your electrical system. In addition, we provide turnkey, engineered solutions to replace legacy or outdated protective relaying to modern industry standards and technologies.

NEHER-MCGRATH STUDY

The Neher-McGrath power system study is integral in the modern design and analysis of electric power distribution systems. It addresses both immediate operational needs and long-term system sustainability, making it an indispensable tool for infrastructure planning. The study focuses on the thermal performance of electrical conductors and cables under various loading conditions, ensuring temperature limitations are not exceeded. Factors like conductor material, insulation type, ambient temperature, and installation conditions (underground, conduit, air) are considered. These factors play an important role in determining the balance between the heat generated by the rated ampacity and the heat dissipated into the surrounding environment. By understanding these thermal limitations, the Neher-McGrath study not only ensures your distribution system operates safely and thereby reduces the risk of failure, outages, or fire hazards. This study also enables our engineers to design systems capable of handling future load increases without significant upgrades or capital investment.

CONTACT

Bill Lane
Director of Sales
253.778.3503

WWW.PRAETORIANPOWER.COM

HONESTY · INTEGRITY · ACCOUNTABILITY