



Qual-Tech Engineers provides analysis solutions for commercial and industrial power systems. The analyses that we perform support the optimum operation, reliability and safety of these power systems. The planning, design and operation of a power system requires comprehensive analyses to evaluate present system performance and to establish the effectiveness of alternative plans for system expansion.

- **Short circuit** analysis to determine protective device ratings of existing or planned equipment.
- **Overcurrent coordination** to minimize the hazards to personnel and equipment while allowing the least disruption of power service.
- **Arc flash** analysis, which follows IEEE, NFPA 70E, NESC, and OSHA standards and guidelines, to improve employee safety and equipment protection. Multiple operating conditions are considered to ensure accurate PPE levels are assigned to equipment. Recommendations are made to mitigate hazard levels. Durable labels are produced for equipment to clearly identify PPE requirements, shock hazards, and working distances.
- **Load flow** studies for system planning to identify conditions that may cause overloads or poor voltage levels.
- **Motor starting** and **flicker** analysis can identify operational issues with large equipment like compressors and arc furnaces.
- **Stability analysis** to understand generator system performance under load changes or transient conditions.
- **Power factor** and **harmonic** solutions to identify utility bill savings, measure and calculate distortion levels, determine the potential for operational issues, and provide recommendations to reduce harmonic distortion. **Turnkey harmonic filter** solutions are available.
- Engineers are available to travel to your facility to safely complete load and harmonic audits, collect system data for analysis, commission harmonic filters, and finalize equipment arc flash labeling.