



## ELECTRICAL MAINTENANCE SERVICES

- Industrial maintenance
- Develop and execute E&I maintenance plans
- Energy and industrial facility shutdown & turnaround support
- Commissioning & startup support
- System & equipment inspections
- Calibrations
- Device (Instrument, Electrical, Pneumatic)
- Fire & gas
- Electronic flow measurement
- Shutdowns
- Powerline
- Repair shop, sales and service
- Pumps, valves, actuators, meter runs, and PSV servicing
- Device & equipment rentals
- Document control
- Procurement



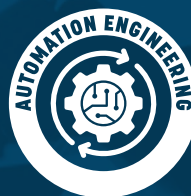
## MAJOR CONSTRUCTION

- Full-spectrum instrumentation, electrical, automation and controls
- Green field facility & wellsite construction
- Brown field facility & wellsite expansion
- Modular process building pre-wire
- Modular pipe rack modules pre-wire
- Modular E-House fabrication & pre-wire (including skid & building)
- Power generation packages
- Low & medium voltage power distribution equipment installations
- Commissioning & Start-up
- Decommissioning
- Quality control



## AUTOMATION

- Instrument procurement & supply
- Hardware & software procurement, migration, and upgrade
- Facility I&E design, construction, and project management
- EFM installation, service, and calibration
- System design, programming, fabrication, installation, testing, integration and commissioning — includes PLCs, RTUs, HMIs, and SCADA, as well as other communication systems
- Preventative maintenance, repair, troubleshooting, and scheduling
- Turnarounds
- Embedded Technicians



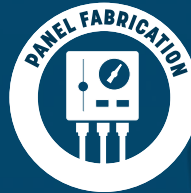
## AUTOMATION ENGINEERING

- Control narratives, safe charts, PFD's and P&ID's
- SCADA, PLC, and HMI system development and design
- Project management
- Hardware and software procurement
- Complete documentation
- Panel design, fabrication, and testing
- Customization of data reporting to suit customer's needs
- System programming — PLCs, RTUs, communications, node polling
- System installation, testing and commissioning
- Custom operations/instruction manuals user training
- Customization of field controls to suit customer's needs



## COMMUNICATIONS

- Communication systems design
- Optimization through RF analysis/topographic data
- Mobile network design deployment
- CSA and non-engineered tower support/deployment
- Wired & wireless networks
- Two-way radio system design
- Cost/benefit analysis
- Objective audit & system assessment
- Licensing & compliance audit
- **Fiber optics**
  - Structured cabling & category cabling
  - Fully certified for fiber optic design, installation, and testing
  - Large-capacity fusion splicing
  - Network analysis and auditing



## FABRICATION

- Control panel fabrication
- PLC, DCS, SCADA, HMI, VDF communications, distribution panels, junction boxes, operator control stations, Photovoltaic (PV) panels, and compressor control panels
- Deliver low-volume custom/high-volume repeatable solutions
- System acceptance testing
- UL certified
- Commissioning support



## MEASUREMENT

- Meter inspections & verification
- Metering discrepancies & auditing
- Technical measurement support & meter installations
- Receipt point inspections
- Regulatory compliance
- Automated data collection
- Liquid meter proving (inline/bench/field)
- Meter exemptions & OPEX saving
- Product sampling & analysis
- Measurement schematics



## COMBUSTION & EMISSIONS REDUCTIONS

- Preventative maintenance
- Annual emergency shut-down testing
- Biennial flame arrestor testing
- Ongoing support & repairs
- Custom burner & emissions tuning
- Burner panel support
- Methane reduction



## RENEWABLES/SOLAR

- Wholesale PV wire supply (RPVU)
- Solar wiring harness fabrication shop services
- Electrical field construction
- SCADA and communications
- Solar operations & maintenance (O&M) support