PRIME POWER™
The Power of Certainty

# CASE STUDY: GENERATOR SALES, SWITCHGEAR INSTALLATION AND RETROFITTING; LARGE LOCAL NATURAL GAS UTLILITY COMPANY

1. Location. Located 50 miles north of downtown Atlanta, the large local gas utility company serves as a natural gas reservoir and distribution center for 1.5 million natural gas customers in more than 237 communities throughout the state of Georgia. The gas company is the largest natural gas distributor in the Southeast.

2. Need. Operating entirely from locally generated power, the gas company's Cherokee facility operates and maintains four 810-kw Waukesha generators. In order to operate continuously, the four generators undergo systematic rotations and maintenance cycles. During peak operating times pipeline demand requires simultaneous operation of all four generators. Increased pipeline demand has necessitated the growth of the Cherokee facility. Without expansion, the gas company faced operational inadequacies, stunted business growth, and potential loss of customer loyalty.

3. Challenge. Recognizing the need to expand their power generation capabilities to keep up with operational growth, the gas company fielded a bid to develop and implement a solution to their expansion requirements. Among other things, the gas company enumerated three requirements: (1) generator sourcing to increase total number of on-hand 810-kw generators from four to five; (2) a new generator control section to be added to their existing switchgear line-up; and (3) supply and installation of a touch-screen monitoring system that is capable of interfacing with their existing Modbus communications network. Prime Power Service's in-house engineering staff and highly respected field service technicians made them uniquely qualified for the challenge and earned them the opportunity to satisfy all three of the gas company's requests.

4. Solution. The Prime Power Project Team determined that the facility did not need a complete overhaul of the existing system. The most efficient solution to the gas company's challenge was a uniform expansion of the system that closely matched the existing equipment. The Prime Power Project Team matched thirty-year-old equipment then designed and manufactured switchgear controls for the fifth generator. Where possible, the Project Team replaced outdated analog meters with digital meters and coupled them to a programmable logic controller for MODBUS data transmission to the plant control room. This asset maximizes efficiency by providing remote real-time generator status reports to facility operators in the control room.

5. Resolution. Prime Power met and exceeded the gas company's expectations and needs. By competitive sourcing, Prime Power delivered the generator some six months ahead of schedule. By custom designing and fabricating switchgear to match the existing equipment, Prime Power maintained uniformity and saved the gas company valuable time and resources by staying with equipment that their in-house maintenance providers already knew how to work on. By retrofitting the existing equipment with state of the art digital relays and monitoring equipment, Prime Power ensured that the gas company's power generation systems adequately served their needs and did not fail. By project completion, the Prime Power Project Team provided the gas company with the ability to rotate generator operations in accordance with their scheduled maintenance cycle, or to simultaneously operate five 810-kw generators when necessary.