

MAJOR FUNCTION

This is complex technical work installing, wiring, programming, testing and documenting the results of, and maintaining various electrical protection, control and communications equipment and apparatus in power plants and substations. An employee in this class exercises significant technical independence in determining work methods and procedures. The incumbent provides oversight of Apprentice Relay technicians in the field and provide feedback to their supervisor as to the apprentice's work progress and abilities. This position is expected to be able to determine acceptable methods of equipment isolation for testing and maintenance, replacements and upgrades of equipment. Additionally, the incumbent is charged with maintaining the duration of agreed upon outage schedules and updates to supervision when work is delayed. Work is performed under the general supervision of the Electric Utility Operations Manager and Electric Utility Engineers who sets objectives, identifies resources and reviews the employee's work through observation, conferences, reports, inspection of activities and by evaluation of results obtained.

ESSENTIAL AND OTHER IMPORTANT JOB DUTIES**Essential Duties**

Assist the Utility in complying with NERC (North American Electrical Reliability Counsel) and FRCC (Florida Reliability Coordinating Counsel) requirements for operation analysis of bulk electric system elements including under-frequency load shedding, transmission and generation protection and control requirements. Additionally, supports specified maintenance tasks of batteries and chargers, current and potential transformers, protective relays- both electromechanical and microprocessor based, AC and/or DC control circuits, supervisory control and data acquisition (SCADA) alarms, and associated communications equipment. This position performs and/or assists in complex technical work laying out, specifying, purchasing, installing, wiring, programming, testing, documenting, maintaining/repairing and calibrating various distribution and transmission system protective and monitoring relays and communications equipment. This may include directing the work of Apprentice Relay technicians and third-party contractors. Purchases, installs, tests, documents and maintains analog and digital high voltage protective relays and control systems, fiber optic and Wide Area Networks, station batteries, battery chargers, control circuits, voice, and data communications. Inspects and repairs computerized control equipment at the City's Central Dispatch Center, electric substations, and power plants. Uses computerized technology to accurately monitor system breaker controls, status, generator controls, voltages, amperes, watts, and vars. Responds to substation alarms or system failures when they occur and maintains equipment associated with network video surveillance for remote substations. Maintains and repairs supervisory control data acquisition (SCADA) and recording equipment at the City's Dispatch Center, electric substations and power plants. Assists and works in conjunction with substation technicians as well as engineering staff or contractors on issues with circuit breakers, power transformers, coupling capacitors voltage transformers (CCVTs), potential or current transformers and other substation equipment. Assists and works with line crew personnel to work with customers in reducing or eliminating electrical interference (RFI). Performs quality assurance testing of all equipment installed. Supervises contractors while new equipment is being installed, modified, or maintained on the City's electrical infrastructure. Maintains knowledge of emerging technologies associated with protective relay and communications equipment as they apply to electric system protection and communications. Requires that a vehicle be driven to perform essential duties. Performs related work as required. Must be able to distinguish between red and green (breaker open and closed indications).

Other Important Duties

Assists engineers in specifying and purchases relay control panels, protective relays, fiber optic cable, communications and power cable, wide area network components. Checks drawings, settings, and other documentation for accuracy. Maintains and adjusts voltage regulator controls, capacitor bank

controls, and power transformer tap changer and temperature controls. Assists substation technicians in Performs related work as required.

DESIRABLE QUALIFICATIONS**Knowledge, Abilities and Skills**

Knowledge of the standards, methods, practices, tools and materials of the repairs and maintenance of computerized electrical power system protection schemes and equipment and Ethernet wide area network communication systems. Knowledge of computer application concerning supervisory control equipment and communications. Knowledge of all associated substation equipment: PT's (potential transformers), CT's (current transformers), capacitor banks, power transformers, tap changers, and power circuit breakers. Knowledge of generator and large transformer protection. Ability to read and interpret blueprints, schematics and service manuals. Ability to test and calibrate analog and digital power system equipment. Ability to understand battery and charger functions and to locate battery grounds. Ability to obtain field data and prepare regulatory government reports. Ability to follow and understand complex oral and written instructions. Ability to communicate effectively, orally, and in writing. Ability to maintain and establish effective working relationships as necessitated by the work. Ability to specify equipment and to follow City purchasing procedures. Ability to read and write Boolean algebra, relay logic, SEL relay logic, trouble shoot Ethernet WANs (Wide Area Network) and routers. Ability to work individually or in a group or team.

Minimum Training and Experience

Possession of a high school diploma, or an equivalent recognized certificate, and successful completion of the Relay Apprenticeship program as an Apprentice Relay Technician, or five years of verifiable experience in electrical system protection equipment relating to the transmission and distribution of electrical power; or an equivalent combination of training and experience.

Necessary Special Requirements

Must possess a valid Class E State driver's license at the time of appointment.

Must be able to distinguish between red and green (breaker open and closed indications).

Established: 05-18-04
04-01-17
03-08-19