

MAJOR FUNCTION

This is semi-skilled work as part of an apprentice training program designed to provide the knowledge, skills, and experience needed to install, commission and maintain system protection, control and communications equipment in order to advance to Journeyman Relay Journeymen. Training includes classroom study (self and/or instructed) and field work relevant to the job function. The incumbent must make satisfactory progress as the training and work experience program develops into more complex and intricate work tasks and demands, and pass various apprenticeship tests. Work is performed in accordance with established policies and procedures under the supervision and direction of the Electric Utility Operations Manager, Electric Utility Engineers, and Journeymen Relay Technicians who provide instructions in methods and assure that proper safety precautions are observed.

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

This is a four year apprenticeship. The training will consist of the City of Tallahassee Electric Utility state certified program learning and performing the following: The use and care of tools and equipment commonly used to work on system protection and communications equipment. Assists in the maintenance, repair, programming, documentation, upgrades and calibration of microprocessor based relay protective systems, remote terminal units (RTU's), giga bit fiber optic communications systems, Radio Frequency Link (RFL) tone equipment, station batteries and chargers, control circuits, IP voice communications, power circuit breakers at 12kv, 115kv and 230kv, 15kv reclosers, distribution automation switches and related communication equipment, 12kv and 115kv capacitor banks, substation and generation power transformers, and generators. Programs, installs, wires, tests, repairs and creates documentation on/for microprocessor based protective relays, Program Logic Controllers (PLC), RTUs, network switches, network routers, as well as electric and electronic circuit boards. Installs, documents, trouble shoots, maintains and repairs aerial and underground fiber optic cable and splices and patch panels at the City's Dispatch Center, electric substations, and power plants. Assists and works with substation technicians on problems of high voltage circuit breakers, reclosers, power transformers, coupling capacitor 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 new equipment installed. Works with contractors while new equipment is being installed, modified, or maintained on the City's electrical infrastructure. Requires that a vehicle be driven to perform essential duties. Performs related work as required. Works in accordance with all safety rules and regulations. At the completion of the apprenticeship, the employee must perform all duties pertaining to Electric Utility Relay operation and maintenance. Must be able to distinguish between red and green (breaker open and closed indications).

Other Important Duties

Provide drawing markups (redlines, field notes, etc) to assist in documentation upkeep. Maintains and adjust voltage regulators , pole mount and pad mount. Ability to work individually or in a group or team. Performs related work as required.

DESIRABLE QUALIFICATIONS**Knowledge, Abilities and Skills**

Knowledge of electric power protection and control schemes, IP communications, and familiarity of the SEL and Cisco programming, electrical power high voltage standards, methods, practices, tools and materials. Knowledge of various substation equipment. Ability to read and understand alternating current (AC) and direct current (DC) control schematics, blueprints, and service manuals. Basic understanding of 3-phase power systems. Ability to test and calibrate fiber optic cable and telecommunications system equipment. Ability to understand battery and charger functions, locate

battery grounds and interpret maintenance reports associated with each. Ability to prepare various reports in Microsoft Word and Excel. 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.

Minimum Training and Experience

Possession of a high school diploma or an equivalent recognized certificate and completion of an electrical or electronics program from a community college, vocational or technical school; or possession of a high school diploma or an equivalent recognized certificate that is supplemented by vocational education course work in electricity or electronics and two years of verifiable technical experience in electrical, electronic, or controls work; 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.

Established: 04-01-17

Revised: 03-08-19