

JOB OPENING

CITY OF FARMINGTON

JOB POSITION #121 – (SENIOR) RELAY ENGINEER

NUMBER OF VACANCIES: 1 **DEPARTMENT:** Electric Utility / Engineering
WORK LOCATION: MOC **HIRING RANGE:** \$71,500 – \$108,936 / Annual
PAY GRADE: Q – Exempt **TYPE OF POSITION:** Regular / Full-Time
DAYS WORKED: Monday – Friday **HOURS WORKED:** 8:00 a.m. – 5:00 p.m.
APPLICATIONS WILL BE RECEIVED UNTIL: Until Filled

*Resumes submitted without a City of Farmington application
will not be considered in our job selection process.*

JOB DUTIES

The City of Farmington reserves the right to hire at either the Engineer or Senior Engineer level depending on experience and qualifications.

ESSENTIAL DUTIES:

Performs administrative and field supervisory work necessary to coordinate and supervise the development, installation, and maintenance of existing and new construction of the Electric Departments SCADA, communications, and relay and control equipment.

Works under the general supervision of the Engineering Transmission and Distribution Supervisor, and with guidance from the System Protection Engineer.

Assists in installation and maintenance work done by the Relay Technicians.

Assists in the preparation of divisional budget. Also assists in long range protection budget planning in assigned area. Compiles and recommends system improvements for the five-year plan.

Assists in identifying the need for major capital additions and project requirements to maintain integrity of the electric transmission network.

Designs system improvements and additions where substation relays are concerned. Compiles all necessary supportive data to present findings and reports findings and recommendations to supervisor.

Responsible for reviewing and modifying contract engineer developed specifications and drawings pertaining to substation design and material procurement in the best interest of FEUS.

Assists in developing construction contracts for the purposes of installing new or replacing existing relays, relay controls, SCADA, and any other cyber equipment related to the system protection and operation.

Acts as the project manager for in-house and contracted projects, responsible for tracking and reporting costs and resource availability and deployment as they pertain to relay specific projects.

Responsible for maintaining and reporting facets of NERC/WECC Compliance requirements appropriate to system protection.

Offers technical assistance in installation, testing, and calibration of protective relaying equipment utilized on the Electrical Utility System.

Offers technical assistance in installation and testing of remote terminal equipment for the Utility's Supervisory Control and Data Acquisition (SCADA) System.

Reviews contingency plans to restore service under emergency conditions.

Conducts studies and develops information as needed to determine system design and customer loading guidelines for Engineering Division.

Collects and verifies engineering data collected at substation and other specific locations for relay operations.

Provides reports on the status of project milestones and adjusts schedules accordingly.

Creates reports from SCADA or metering as needed.

Evaluates materials, equipment, procedures, and analyzes material failure patterns to assure safety and reliability of the transmission and distribution system protection.

Assists as needed to update and revise contingency plan for the electric utility.

Coordinates activities with relay technicians concerned with technical developments, and resolving engineering design and test problems.

Runs fault studies for the transmission system and recommends necessary upgrades in equipment. Provides fault current quotes on transmission systems as required.

Performs data entry as required for analysis and programming of electrical relay and computer systems.

Must have ability to design, program, and coordinate substation relays, distribution reclosers, sectionalizers, and fuses on the distribution system.

Assists with power quality issues.

Offers technical assistance in the installation and calibration of telemetry equipment.

Designs and modifies existing energized control and relay circuits with technique and precision in order to avoid outages or damaged equipment.

Offers technical assistance in the restoration of service to the Electric System following SCADA or protective equipment failure or malfunction.

Oversees design of SCADA RTU data bases.

Assists in scheduling the maintenance of shared protective equipment with neighboring power utilities and power producing customers.

Reviews test reports on relay equipment.

Will interface with SCADA Engineer as necessary while building new or verifying communications infrastructure.

Creates a test bed for the 61850 protocol with the intent to usher in the latest SCADA and relay communications technologies.

Perform such other duties as assigned by Electrical Engineering staff, including calculations and designs for distribution system substations, system protection, transmission, and capital improvements.

NON-ESSENTIAL DUTIES:

Occasional travel required to attend manufacturer's schools.

Assists in diagnosing malfunctioning electronic and electro-mechanical components used in SCADA, telemetry, and relay equipment. Knowledge of both types of relays necessary.

Will inspect wiring on protective relay switchboards and substation electrical equipment.

Will inspect and on rare occasion, may assist installing cables for relaying, SCADA, and controls in conduits, cable trays, and troughs.

Substation and transmission design work under direct supervision of Electric Engineering Manager with guidance from Consultant as may be necessary.

System protection coordination work and analysis under direct supervision of System Protection Engineer.

May serve on various employee committees, as required, and assigned.

The duties listed above are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.

QUALIFICATIONS

This position is subject to the City of Farmington's Drug and Alcohol Testing Policy which includes: pre-employment testing, post-accident testing, random testing, reasonable suspicion testing, return to duty testing, and follow-up testing.

Senior Relay Engineer: Graduate from an accredited university with a minimum of a bachelor's degree in electrical engineering. Senior engineer position shall require registration as a professional engineer in the state of New Mexico, or registration with another state with reciprocity with the State of New Mexico and a minimum of **five years** previous experience within an electrical utility working with relays, SCADA and/or substation controls, or similar setting. Additional years of experience may be considered in lieu of professional registration.

Familiarity with 61850 protocol is required for the Senior position.

Familiarity with NERC/WECC Compliance requirements is required for the Senior position.

Relay Engineer: Graduate from an accredited university with a bachelor's degree in electrical engineering. Three years previous experience within an electrical utility working with relays, SCADA and/or substation controls, or similar setting.

Some experience with relays, SCADA, controls, and/or communication garnered from other industries may be used to substitute for Electric Utility experience.

A minimum of two years experience is required in the use of electrical schematic diagrams, manufacturer's instruction books, contractor-submitted plans and drawings, and control wiring diagrams, especially where relays and remote terminal units (RTU's) are applied.

Knowledge in electrical protective devices and SCADA required.

Knowledge of coordinating protection on breaker, reclosers, sectionalizers, and fuses.

Knowledge of using fuse curves both manually and with computer programs such as ASPEN.

Familiar with relay testing methods and equipment.

Must possess and maintain a valid New Mexico driver's license.

Must demonstrate ability to communicate with others through oral and written media.

Must possess the ability to establish and maintain effective work relationships with co-workers, supervisors, contractors, customers, other outside entities and the public.

Willingness to accept assignments in all phases of Electric Utility operation for the purpose of developing a well-rounded background.

Extensive Background Check Required.

PHYSICAL DEMANDS:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of the job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently required to walk and occasionally will be required to walk over rough, undeveloped, heavy brush, and rocky ground. The employee is frequently required to stand; use hand to finger, handle, feel or operate objects, tools or controls; and reach with hands and arms. The employee is frequently required to sit, talk or hear; and occasionally required to stoop, kneel, crouch, or crawl.

The employee must occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus. Employee will be viewing computer screen for several hours at a time.

WORK ENVIRONMENT:

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Work is performed inside/outside in all types of weather conditions.

While performing the duties of this job, the employee occasionally works in outside weather conditions. The employee is occasionally exposed to wet and/or humid conditions.

The noise level in the work environment is moderate while in the field and quiet in the office.