

## **Tri-County Electric Cooperative, Inc. Position Description**

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**Job Title: Relay Technician**  
**Department: Operations**  
**Reports To: Relay Supervisor**  
**Effective Date: August 2014**  
**Classification: Non-Exempt**

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### **JOB SUMMARY:**

To provide efficient installation, testing, maintenance and calibration of the cooperative's protective relaying equipment and electrical/electronic equipment associated with the power delivery and communications systems. To ensure the service of the equipment is protected at all times.

### **EDUCATION, TRAINING AND EXPERIENCE:**

High school diploma or equivalent. Two or more years experience in electric utility industry testing, calibrating and repairing protective relay devices and revenue meters and/or five or more years in substation work experience. Completion of a four (4) year electrical apprenticeship program or an Associate's Degree in Electrical/Electronics Engineering Technology preferred.

### **ESSENTIAL FUNCTIONS AND DUTIES:**

1. Perform testing and maintain results of protective relaying equipment of the electrical systems; including all protection designs incorporated by the cooperative.
2. Perform switching functions to transmission and distribution apparatuses.
3. Responsible for installation, maintenance and testing of protection and relaying systems including low-side auto transfer schemes, transfer trip equipment, transmission system transfer schemes, breaker travel analysis and transformer turns ratio (TTR) testing.
4. Troubleshoot relays and provide advice during outages.
5. Provide technical support for equipment and device operations including microprocessor controls, battery charges and line device records.
6. Assist mobile substation team to maintain, inspect, test and install mobile substations.
7. Comply with the requirements of the internal compliance procedures for NERC. Assist in the process of complying with NERC directives.
8. Inspect and maintain assigned vehicle and ensure service requirements are reported as soon as detected.
9. Ability to work outside of the regular work day (eight hours a day, five days a

week), due to scheduled maintenance, damage repairs, respond to after hour emergencies, etc.

10. Create and maintain accurate records, files and reports.
11. Perform duties in accordance with all applicable policies, rules, regulations and laws pertaining to Tri-County Electric.
12. Serve members and customers by taking appropriate action on requests and questions promptly and ensure they are treated with courtesy at all times.
13. Maintain effective communications with departments to assure coordinated efforts and understanding in carrying out objectives. Work to obtain mutual agreement on problems involving coordination.

#### **KNOWLEDGE, SKILLS AND ABILITIES:**

1. Knowledge of applicable codes (i.e., National Electric Safety Code (NESC), National Electric Code (NEC), National Fire Protection Association (NFPA) Codes and OSHA 29 CFR 1910).
2. Effective communication to establish and maintain effective relationships with customers, management staff and other associates.
3. Operate a laptop computer using Microsoft operating systems and office software with the ability to install and use technical software to program meters and controls.
4. Ability to program and use electronic relays, meters and test equipment through interfaces provided on the equipment without using a computer interface.
5. Ability to read and interpret documents such as safety rules, operating and maintenance instructions, procedure manuals, electrical and electronic schematics and wiring diagrams.
6. Understand and perform power system calculations including voltage, current, impedance, power, transformation ratios and three phase voltage and current resultants.
7. Knowledge of test equipment (i.e., power factor test set, micrometer, Meggar, ground resistance tester, phase angle meter, battery tester, oil tester, multi meter, TTR, etc.) and other related equipment.
8. Ability to define problems, collect data, establish facts, and draw solid conclusions.
9. Thorough knowledge of the theory operation of substation relays, power transformers and electric power apparatus used in substations or electric distribution system including voltage regulators, circuit breakers, reclosers and other related equipment.
10. Ability to interpret schematic diagrams and troubleshoot all types of relay circuits.
11. Must have the ability to direct and perform the testing, repair and installation of power transformers and all electric power apparatus on the system. Must be skilled in switching live conductors in a substation environment up to 115 KV.

**OCCASIONAL RESPONSIBILITIES AND DUTIES:**

1. Participate in technical, professional and community activities.
2. Travel by automobile or airplane for work, training or planning purposes.

**SUPERVISION RECEIVED AND EXERCISED:**

This position reports directly to the Relay Foreman.  
Supervision none and directs none.

**PHYSICAL, MENTAL AND VISUAL DEMANDS:**

1. Must possess manual dexterity and visual acuity, as well as the ability to listen and communicate orally, to stand and walk; to frequently sit, bend, stoop, squat, lift and carry between 50 – 75 pounds; to occasionally push and/or pull, reach above the shoulder level, climb, balance, kneel, crouch and twist.
2. Manual dexterity is required to maintain proper safety while performing maintenance work, learn safe working procedures, drive the vehicle to and from job sites, construct and/or maintain electrical equipment, move materials, manipulate work materials both bare handed and working in electrically tested rubber gloves, and to complete necessary paperwork.
3. Constantly uses visual acuity and sense of hearing to locate possible hazards while performing duties of position.
4. Constantly stands and walks, either on the ground, while working off ladders or structures and/or in the bucket to perform maintenance.
5. Frequently sits in a vehicle to drive and/or ride to various sites. The average number of miles and amount of time driving/riding would vary depending on the location of scheduled work.
6. Frequently lifts and carries between 50 – 75 pounds, which consists of coil wire, miscellaneous substation and the line equipment, and test equipment. Occasionally transformers will have to be lifted; however, they are usually lifted by fork lift or line trucks.
7. Frequently pushes and/or pulls wire cable through conduit, reaches above, at and below shoulder level to perform maintenance, twists while performing maintenance.
8. Occasionally climbs and balances on ladder, kneels and crouches in certain underground installations and maintenance situations.
9. Requires close vision, distance vision, color vision, peripheral vision, depth perception and the ability to focus.

This position description is not intended to be all-inclusive; an employee will also perform other job responsibilities as assigned by the immediate supervisor or management.

Management reserves the right to change position descriptions, specifications or work schedules to accommodate individuals with disabilities or as the need arises.

This position description does not constitute a written or implied contract of employment.