

# Four County Electric Membership Corporation

## Position Specifications

### First Class Line Worker

**Position Objective Summary:** Performs highly skilled, transmission, distribution, and electrical work in the installation, construction, maintenance, and repair of underground and overhead electric transmission, distribution and service lines, transformers, meters, metering equipment, electrical substations, and related equipment. Other duties include climbing wood poles, ladders, and towers.

#### **I. Education**

High school graduate or equivalent in formal academic education.

#### **II. Experience**

First Class Line Worker – Minimum five (5) years experience on line crew or in electrical-related field required.

#### **III. Mental and Physical Requirements**

The mental and physical requirements for line worker positions include, but are not limited to the following:

- Majority of work is outside. May be exposed to extreme weather conditions and must be able to work day/or night. Must make and maintain bona fide residential abode within twenty (20) statute miles of assigned office.
- Must be able to grasp, hold and position poles and utility conductors.
- Must possess the physical strength to lift and/or move up to 100 lbs. of materials/equipment, without external assistance of other personnel or mechanical aids.
- Must have the ability to climb poles, stoop and bend into awkward positions to accomplish assigned responsibilities.
- Must have the ability to effectively utilize a two-way radio.
- Must be able to follow verbal and written instructions.
- Must have the ability to access, input, and retrieve data contained in the computer system to perform assigned operations.

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- Must acquire and maintain a valid North Carolina Class A Commercial Driver's License and operate a motorized vehicle without the assistance of another employee.
- Must have the ability to effectively interact with other Cooperative personnel, customers, and the general public.

#### **IV. Non-Discrimination**

Four County Electric Membership Corporation will recruit, employ, and promote employees in all job classifications without regard to race, color, sex (including gender identity, sexual orientation and pregnancy), age (40 or older), religion, national origin, disability (including physical or mental impairment), genetic information, or veteran status.

#### **V. Exempt Status**

These positions are not exempt from the overtime requirements of the Fair Labor Standards as amended.

#### **VI. Reporting relationships**

- Reports to: Operations Supervisor or System Operations Supervisor
- Directs: Line personnel of less skill as assigned
- Receives Work Direction from: Operations Foreman or other line personnel of greater skill as assigned

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#### **VII. Essential Duties and Responsibilities**

##### **A. Transmission and Distribution Line work** 75%

- Familiar with effects of electric shock and other hazards involved in electric work.
- Acquire thorough working knowledge of First Aid/CPR, bucket rescue and pole top rescue procedures.
- Demonstrate progression in Line Worker Training Program by completing assigned modules and successfully completing any attended schools. (Attachment A – Line Worker Training Progression)
- Acquire a thorough knowledge of the Cooperative’s Safety manual and its application to all duties and follows all safety rules including OSHA requirements.
- Adheres to Four County policies concerning “on-call” personnel and is readily available for emergencies during off-duty hours.
- Comprehends the name, use, capabilities and maintenance of all material and tools used in the construction of overhead and underground distribution lines and can identify parts of climbing tools.
- Determines anchor installation location and angle.
- Loads and unloads poles and wire according to proper procedures.
- Plumbs and tamps poles.
- Installs or replaces guy wires, grounds rods, wire holders, sag conductors, and single-phase, self-contained meters.
- Operates hand line and block ropes.
- Climbs poles, connects single-phase service entrance and repairs break in service wire with supervision of appropriate personnel.
- Splices all types of distribution conductors.
- Reads Four County detail maps.
- Works energized (below 600 volts) structures from bucket truck, by climbing or use of a ladder.

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- Selects and places pole correctly on job site; digs hole for pole by hand for installations; and, rakes pole according to specifications.
- Installs wire holders and sags service drops.
- Repairs break in service wire with supervision of appropriate personnel.
- In appropriate situations, grounds truck according to proper procedures.
- Follows specifications and frames poles on “A” specifications.
- Knows distribution line structures.
- Performs other duties as requested by supervision
- Operates line truck to set poles; knows classes of poles and proper setting depths; and, plumbs and tamps energized line poles, with supervision of appropriate personnel.
- Knowledgeable of and recognizes sagging wire and different types of connections.
- Climbs poles, installs/repairs security lights, replaces transformers, repairs break in primary or secondary service wire, cuts and trims trees around hot and cold lines with supervision of appropriate personnel.
- Splices secondary wire and primary conductor, bisects and installs anchors and guys
- Begins to learn the difference between air cooled and oil cooled transformers.
- With supervision, cuts and trims trees around energized and de-energized lines, practicing safe operating procedures.
- Works with local office operations crew minimum of three (3) months.
- Follows specifications of sketch sheets and frames poles on A, B & C phase specifications.
- Works energized structures (greater than 600 volts) from bucket truck or by climbing. Primary work limited to installing a saddle and covering up.
- Can identify various circuits of connected batteries and knows procedures for recharging batteries.

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- Knows proper way of hand setting poles; classes of conductors and conductor ties; methods of reeling out conductors; methods of grounding; procedures; importance of rubber protection equipment; correct procedure for personal grounds; and, voltages by type of construction.
- Installs cross arm dead ends and pulls conductors and ties in conductors on poles with de-energized lines; replaces transformers; repairs break in primary or secondary service wire.
- Disconnects/reconnects consumer electrical services; answers trouble calls; determines sources and directions of feeds; check voltage at weatherhead or meter sock; connects services and transformers on poles; installs and terminates underground secondary cable; and, fuses transformers.
- Knows correct work order procedures and correct procedures for work construction.
- Performs maintenance on climber's body belt and safety strap.
- Assists in training and developing lesser skilled line workers.
- Working knowledge of NESC and Cooperative's specifications. Capable of inspecting, approving and/or rejecting consumer's service entrance wiring prior to connection and is able to check road, building and foreign circuit clearances.
- Knowledgeable in the area of distribution transformer theory.
- Knowledgeable in the area of substations.
- Familiar with Cooperative's electric system and can determine feeds, phases and can sectionalize and locate trouble.
- Proficiently uses the Cooperative's computerized (AM/FM/GIS) mapping system to design work orders, create electronic field drawings and identify service locations.
- Under supervision, begins to handle hot conductor greater than 600 volts.
- Installs or replaces poles, crossarms (including double arms), insulators, conductors, distribution transformers, fuse cutouts, switches, lightning arresters and oil circuit reclosers.

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- Knows insulator insulating values, components of substation and the steps to take substation out of service, and method of measuring voltage and voltage drops.
- Operates oil circuit reclosers, electronic equipment and switches including gang-operated devices; makes transformer connections internal and external; makes necessary repairs to conductors; applies tension and brings conductor to sag and makes up deadends.
- With supervision, installs crossarm on poles with energized lines; deadends and pulls conductors on energized lines; and ties in conductors on poles with energized lines.
- Determines probable cause of substation outages.
- Uses and has complete working knowledge of name, care and use of hot line sticks and equipment including the rigging of such equipment on transmission lines.
- Identifies problems and knows correct procedures in troubleshooting primary lines and what precautions to observe when doing so.
- Knows: basic parts and classes of meters and matches meters to type of service; methods of determining phase rotation; and, procedure for changing direction of 3-phase motor.
- Arranges in steps to locate faulted transformer bank; assists in relocating energized poles and making conductor installations over or under foreign-owned energized circuits; works from bucket on energized or de-energized lines; performs pole and substation inspections; and, patrols, inspect and inventories lines as required.
- Identifies: secondary coil connections; various transformer banks; secondary connections for transformers; and, phases of substations.
- Installs and connects transformer banks in accordance with RUS spec book.
- Installs and removes distribution air break switches, voltage regulators, capacitors, current and potential transformers, substation transformers, reclosers, and other substation apparatus.

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- Knowledgeable of equipment for phasing system (rotation meter, etc.)
- Has working knowledge of “y” and Delta electric systems. Banks, connects, checks polarity, and rotation of transformers.
- With qualified personnel, performs substation switching and operations.
- Working knowledge of NESC and Cooperative’s specifications. Capable of inspecting, approving and/or rejecting consumer’s service entrance wiring prior to connection and is able to check road, building and foreign circuit clearances.
- Knowledgeable in the area of distribution transformer theory.
- Knowledgeable in the area of substations.
- Familiar with Cooperative’s electric system and can determine feeds, phases and can sectionalize and locate trouble.
- Proficient in all phases of overhead and underground work, hot stick and bucket work and effects of electric shock and other hazards involved with electric system work.
- Knows safety rules to observe while working in bucket, safe and proper method of grounding bucket truck and how to perform hot work from a bucket.
- Performs: all forms of transformer connectors and understands transformer theory; 3-phase bank installation, URD primary and secondary installation; and, single-phase transformer and 3-phase metering installation.
- Locally operates or disables substation motor control.
- Recognizes single phasing of equipment and troubleshoots all areas of system.
- Runs service truck, without supervision, if needed.
- With direction of Engineer, opens RTU to check continuity of fuses.

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- Handles self appropriately within substation to assure safety for self and fellow employees.
- Knowledgeable of all types of conversions, what electrical equipment requires protection by lightning arresters; and, methods of coordinating reclosers with other reclosers.
- Knowledgeable in substation construction and inspections.
- Learns and comprehends metering theory as applicable.
- Has ability to perform switching utilizing proper procedures.
- Patrols lines for outages of overhead and underground faults.
- Installs line or sub regulator without supervision and removes same.
- Sets time delays on voltage regulator and voltage settings.
- Knows and exercises precautions for handling capacitors.
- Proficiently uses the Cooperative's computerized (AM/FM/GIS) mapping system to design work orders, create electronic field drawings and identify service locations.
- Participates in on-call rotation in lead role capacity.
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#### **B. Safety**

**25%**

- Operate and maintain equipment including line/bucket truck, trencher, trailers and power tools such as chain saws, drills and ground rod drivers according to operating/safety procedures and good housekeeping guidelines.
- Recognizes strengths and functions of different ropes and different knots and their uses for various jobs.
- Knowledgeable of all highway safety and information signs, proper radio procedures and winch boom signals.
- Knowledgeable of: construction hardware; overhead construction tools; transmission line structures; URD distribution construction methods; underground



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construction hardware; safe depths for primary and secondary conductors; transformer parts and functions; and, distinguishes differences between additive and subtractive transformers.

- Recognizes and reports system hazardous conditions.
- Cleans work site of scrap materials and debris upon job completion
- Inspects pole to insure they are safe for climbing.

#### IV. **Relationships**

##### A. Internal

- Operations Supervisor - Should be kept informed of all activity in the operations area in a timely fashion.
- Operations Foreman- Should be kept informed of all activity in the operations area in a timely fashion
- Line worker Crew members- Coordinates and receives instruction regarding technical electrical linework training and safety practices

##### B. External

- Customers - Maintain good positive working relationship with customers by providing prompt, courteous and reliable service

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Attachment A

Line Worker Training Progression

Required Modules and Suggested School Attendance

Classification	Training Period	Year in Progression	Modules Assigned	Suggested JT & S Schools
AP I	1 year	1 <sup>st</sup>	AP I (Books I & 2)	Intro, OH I or UG I
AP II	1 year	2 <sup>nd</sup>	AP II	OH I and UG I
AP III	1 year	3 <sup>rd</sup>	APIII	OH II, UG II
AP IV	1 year	4 <sup>th</sup>	AP IV	OH III
2 <sup>nd</sup> Class	1 year	5 <sup>th</sup>	2 <sup>nd</sup> Class	OH IV
1 <sup>st</sup> Class	-----	-----	-----	Adv. Line, Substation, Transmission
Operations Foreman	-----	-----	-----	NESC I and II