

ELECTRICAL ENGINEER 1

Cherokee County Electric Cooperative Association – Rusk, TX

1 NATURE OF WORK:

Under the general direction of the Director of Engineering, plans, advises, and assists in engineering, and maintenance of the cooperative's electric and communication systems. Is involved in difficult work on highly technical problems and participates in formulating and enforcing CCECA policies, standards, and specifications. Exercises a high degree of decision-making involving interpretation and application of CCECA policy and analysis of facts and circumstances. Has regular contact with other staff, consultants, contractors, and members requiring considerable tact and diplomacy. Occasionally engages in light to moderate physical exertion and works in both an office and field environment. May be exposed to extreme climatic conditions.

2 DUTIES AND RESPONSIBILITIES:

- (a) Meets and reviews with District staff, developers, consultants, and other agencies in the preparation of plans and specifications for individual developments.
- (b) Completes plans, cost estimates, and staking sheets for projects, developments, and additions to the district's electrical distribution system.
- (c) Responsible for engineering design for new construction single and three-phase line construction, existing plants, load flows, fault calculations, system specifications, etc.
- (d) Assists in design and layout of underground subdivisions and other developments.
- (e) Prepares lighting layouts and assists customers with other engineering related matters.
- (f) Assists with technical support and lends guidance to staking technicians in the design and layout of construction projects as needed – particularly with large power loads.
- (g) Interprets plans, blueprints, safety orders, and government rules and regulations as related to planning and engineering activities.
- (h) Analyze project requirements to determine justification and feasibility for implementation.
- (i) Assist in developing and maintaining all drawings.
- (j) Review the location for new lines and substations, including the selection of right-of-way, compensation, and damage claims.

- (k) Analyzes engineering proposals, process requirements, and related technical data pertaining to industrial applications and equipment design.
- (l) Work with and communicate information with engineers, consultants, RUS, ETEC and other outside companies and agencies that are affiliated with the Cooperative.
- (m) Responsible for compliance with all RUS, NESC and other regulatory codes and procedures.
- (n) Maintains knowledge of RUS and bulletins relating to engineering.

- (o) Complies with CCECA's safety rules and regulations while performing duties. Complies with OSHA rules and regulations.
- (p) Assists in management as well as maintaining hardware for SCADA.
- (q) Assists in maintaining Engineering Analysis model.
- (r) Correspond with interconnected utilities on operating and planning matters.
- (s) Assists in the development of District construction standards and specifications.

Prepares or assists in the preparation and maintenance of the district's electrical mapping system.

Design, specify, install, and check out equipment required

- (t) Maintains engineering records and files.
- (u) Compiles information needed for all required reports.
- (v) Participates in Annual Meeting, safety meetings, and training programs as required.
- (w) Supervise the calibration, repair and maintenance of all instruments and control systems.
- (x) Work with and assist employees of other departments within the Cooperative, as required.
- (y) Works with engineering consulting firms in the preparation of technical studies.
- (z) Works with Marketing Department with large power customers and power quality issues.
- (aa) Reviews and solves power quality problems.
- (bb) Performs other tasks as may be assigned.
- (cc) This list of duties and responsibilities is not intended to be all-inclusive and can be expanded to include other duties or responsibilities that management deems necessary.

3 QUALIFICATIONS REQUIRED:

Possession of a Bachelor of Science degree in Electrical Engineering from a college or university accredited by the Accreditation Board of Engineering and Technology. Ability to communicate effectively both orally and in writing. Possession of a valid motor vehicle class "c" driver's license. Ability to perform moderate physical activity and work in extreme climatic conditions.

(a) Skills and Abilities

Must possess knowledge about operating and electrical systems. Excellent computer skills are required. Must have good mathematical skills and an above average knowledge of physics, science, and mechanics. Must be knowledgeable about current industry technology, concepts, principles, practices, and established procedures. Ability to read and understand blueprints, staking sheets and specification books for maintenance and construction projects of the Cooperative. Good mathematical, drafting and mapping skills are required. Strong analytical skills required. Ability and willingness to cooperate and work as part of a team. Good project management skills required. Ability to operate standard office equipment, including a two-way radio.

(b) Education/Experience

Requires a bachelor's degree in electrical engineering or equivalent engineering field.

(c) Physical, Mental, and Visual Effort

Must have the ability to work steadily for prolonged periods of time, working with several people, doing a variety of tasks, with many interruptions, deadlines, requiring a high degree of accuracy and under a heavy workload, if necessary. Mostly work at desk with some standing, stooping, reaching, bending, lifting, grasping and fine motor skills required. Travel will be required, with some overnight stays. Deal largely with preparing and analyzing data and figures, computer terminals, and extensive reading.

(d) License and Certification

Must have a valid driver's license.

(e) Principal Place of Work

The principal place of work for this position will be Rusk, Texas.

(f) Work Conditions

Work in a well-lighted, climate-controlled area. Occasionally subject to outside environmental conditions with no effective protection from weather conditions.

4 **WORKING CONDITIONS:**

Work is both in controlled office environment and outside in extreme temperatures (0 to 100 degrees F), in ice, snow, rain, sun, high humidity, etc. Must be able to walk a mile over uneven terrain, jump ditches, and any other requirement associated with power line construction and right-of-way clearing to observe work. Must be able to lift and carry up to 50 pounds

Work is typically performed indoors at a desk and outdoor work is often required. Occasionally the job exposes employee to machinery and its moving parts, fumes and/or chemicals, and a noisy environment

5 **MACHINES, TOOLS, EQUIPMENT:**

Equipment typically used includes laptop computer, personal computer and basic office equipment. Must be able to operate or learn to operate an underground electric line locator, multi-meter and understand programmable meters.

6 **SPECIALIZED SKILLS AND KNOWLEDGE:**

(a) Able to lead by example.

(b) Must have the ability to communicate technical information verbally and in writing.

(c) Must have the ability to communicate highly technical information to those who have limited knowledge.

(d) Must have knowledge of computers and ability to use computers. Ability to use engineering software such as Milsoft and auto cad, SCADA; spreadsheets such as Excel, and word processing such as Word.

7 INTERNAL RELATIONSHIPS:

Other Employees – Provides and acquires information and assistance necessary to assure the achievement of department and cooperative goals.

8 EXTENAL RELATIONSHIPS:

- (a) Electric Cooperatives – For exchange of information with other Electric Cooperatives.
- (b) ETEC – For exchange of information and networking to improve service.
- (c) Member/Owners – For assistance with electrical loads, etc.
- (d) Vendors – For information on equipment.

9 REPORTS TO:

Director of Engineering