

Mountain Electric Cooperative seeks a qualified, engaged professional to fill the position of Electrical Engineer I.

About Mountain Electric Cooperative

MEC is a member-owned, progressive cooperative serving 36,600 electric members in Johnson, Unicoi, Carter counties located in Tennessee and Avery, Burke, McDowell and Watauga counties in North Carolina. MEC has offices in Mountain City and Roan Mountain, Tennessee, and Newland, North Carolina. MEC is preparing for growth with new planned subdivisions.

MEC was incorporated in 1941. It is a TVA power distributor. MEC has 700 square miles of service area and 2,300 miles of line. MEC employs 90 professionals with annual electric revenue of \$74 million.

Classification Responsibilities: The Electrical Engineer I is an entry-level position which uses on-the-job training to develop skills and abilities to perform technical engineering tasks required for MEC (Mountain Electric Cooperative) electric distribution operations or Engineering Department's Design Group. Under the direction of the Director of Engineering and Operations, the Electrical Engineer I will assist with tasks by applying knowledge from academic studies, internships, and on-the-job training. In addition, other duties include determining size of transformers; calculating electrical loads; determining conductor sizes; determining proper voltage configurations; calculating voltage losses for various conductor sizes, types, and lengths; determining proper sizing and placement of distribution poles, equipment, and facilities; and performing drafting and design work utilizing GIS (Geographic Information Systems) and Futura software to produce neat, precise, and well-balanced drawings for the construction and maintenance of overhead and underground, primary and secondary distribution circuits and facilities for the electric system. The Electric Engineer I is also responsible for the design, implementation, maintenance, and troubleshooting of protective relaying and control systems used throughout the electric utility transmission and distribution system to ensure the reliable and safe operation of substations, transmission lines, distribution feeders, generators, and associated electrical equipment. In addition, the employee may assist in short- and long-term planning and preparing special studies on the distribution systems and determining operational requirements for electrical loads utilizing electric modeling and analytical tools. The Engineer I will also assist to define electric system improvement priorities, prepare cost estimates, provide budgetary input related to planning, system coordination, operations, and the function of short- and long-term design of the electric distribution system and developing material specifications for all materials used in Mountain Electric Cooperative's electric distribution system.

QUALIFICATIONS

Employee Values All employees of Mountain Electric Cooperative are expected to uphold and exhibit the Cooperatives shared employee values of Knowledge, Respect, and Integrity.

Minimum Qualification Required Graduation from an accredited college or university with a Bachelor's Degree in Electrical Engineering or related field, preferably with coursework in power systems concepts.

Special Requirement Must possess a valid Class D Driver's License by hire or promotion date.

Substance Abuse Testing Due to the safety and/or security sensitive nature of this classification, individuals shall be subject to pre-employment or pre-placement alcohol, drug, and/or controlled substance testing as outlined in MEC policy and procedures.

Preferred/Desirable Qualifications Some (6 months - 1 year) experience in electrical engineering, computer modeling (or related work with an electric utility) is preferred. This experience may include interning as or working directly for an electric utility or operation managing transmission and primary distribution systems.

Our Location

MEC's main office is in Mountain City, Tennessee, with a population of 2,415; it is located in Northeast Tennessee.

Our Benefits

MEC employees enjoy an excellent benefit package including a 401(k) and health insurance plus a competitive salary commensurate with qualifications.

How to Apply

If interested, please download the application form at www.mountainelectric.com and include the following: 1) cover letter, 2) resume 3) contact information (including email) for 3 professional references. 4) Complete application for employment . Applications must be received by September 23, 2026. If you have any questions, please contact Dianne Cress 423-727-1809 or dcress@mountainelectric.com .

All replies are confidential.

Mountain Electric Cooperative is an EEO employer. Race, color, religion, sex, age, national origin, disability, military, veteran status, gender identity, sexual orientation, genetic information, or any other applicable status protected by Federal, State or Local law.

ESSENTIAL FUNCTIONS

Communication: Communicates with the general public, Cooperative employees, vendors, management and consultants to ensure the operational integrity of MEC electric distribution system. Assists in the preparation of written documents including letters, reports and required state and federal documents with clearly organized thoughts, proper sentence construction, punctuation and grammar.

Manual/Physical: Operates a motor vehicle requiring a valid Class D Driver's License to conduct site visits and to make field inspections, measurements and field checks for proposed projects and completed work. Distinguishes colors to input GIS data. Assists in the preparations of plans, drawings, maps, reports and specifications for distribution to other consultants, developers, Cooperative departments and the public. Enters data and information into a personal computer (PC) or other keyboard device (labeling machine) to evaluate and analyze electrical load databases and

generate various reports. Inspects, monitors and evaluates electric utility and customer installations to determine compliance with the National Electric Safety Code (NESC), etc. Works in a variety of weather conditions while performing fieldwork. Lays out (measures and stakes) junction box and transformer locations in the field so the contractor can run secondary conduit to the point of service. Reviews the design of electrical engineering projects. Gathers on-site data in order to maintain mapping records showing the location and size of each pole, device, wire, etc. Operates standard office equipment including personal computers (PC), printers and plotters. Capable of moving objects of up to 50 pounds or more, such as roll paper, paper cartons, digitizing tablets, etc.

Mental: Works with engineers, developers and technicians involved in performing electric engineering activities, including the preparation of job orders, construction drawings, schematic drawings, circuit maps and electric system mapping. Works with electric field crews to determine acceptable placement of electrical facilities. Interprets work plans (proposed, as-builts, construction, site plans, blueprints, etc.). Through the RUS specifications book, obtains an enhanced understanding of line materials and all aspects of line construction and related work. Applies knowledge gained from previous educational coursework to size transformers, calculate electrical loads, establish conductor sizes to meet customer load requirements, establish proper voltage configurations to best meet customer needs and calculate voltage losses for various conductor sizes and types and establishes proper signing and placement of poles and equipment for primary and secondary circuits. Applies the techniques of drafting to produce neat, precise and well-balanced maps and construction drawings.

Conducts research to ensure accuracy and completion of as-built drawings for locating and mapping purposes. Learns to utilize data for map layout and plotting; update maps as new information is obtained; operate a computer for inputting data used to create GIS maps; prepare GIS map products on a computer; identify and document problems; understand procedures, terminology, and the use of system menus and operational system panels; determine the accuracy of source information for building a map; perform detailed records research and apply research to ensure the accuracy and completeness of GIS maps. Assists in the coordination of work activities with other MEC departments, agencies and utility companies. Assists and supports the development of system operating and design procedures and policies. Performs mathematical calculations, structural load analysis, statistical computations and cost analysis to determine structural requirements, service delivery cost and contributions-in-aid of construction. Understands and interprets project plans, schematic drawings, layouts and other visual aids to plan and design necessary electric distribution system improvements. Learns job-related material through on-the-job training and classroom instruction regarding electric distribution system planning, design and operation, including standard operating procedures, federal regulations (NESC, etc.) and other MEC Engineering Standards and Procedures. Inspects, monitors and evaluates work-related information to determine compliance with standard operating and safety standards (NESC standards, regulations and guidelines for Electric assignment).

Knowledge and Abilities:

Knowledge of:

- electrical engineering principles and practices
- electric system design principles/power systems concepts
- symbols and terminology used in engineering drawings
- construction plans and specifications; overall concept of system coordination between protection devices; facilities, materials, equipment, and tools used in the construction and
- maintenance of electrical facilities; and essentials of algebra, geometry, trigonometry and calculus

Ability to:

- learn and interpret instrumentation and control (I/C) diagrams, 1-line diagrams and regulations associated with electric distribution system operations;
- learn to read and interpret construction drawings; use drafting software, including AutoCAD and GIS;
- learn to operate computer software and systems including MilSoft, Light Table, FUTURA, SEL , Designer, Microsoft Word, Excel, Power Point, Access, etc., MEC computerized customer information systems, and proposed workflow/asset management systems;
- understand and write specifications;
- compute quantities and make cost estimates;
- prepare neat and precise maps from plans, sketches, verbal descriptions and specifications;
- maintain a high level of attention-to-detail for quality control purposes;
- maintain effective documentation and system backups of maps and electronic data;
- assist in providing data and maps for detailed operational analysis;
- apply results of analysis to ensure accuracy and completion of map and related data profiles;
- become familiar with industry-specific terminology and symbology; learn the existing ArcGIS/ArcFM GIS system and
- establish and maintain effective working relationships with consultants, engineers, developers, coworkers, management, public officials, and the general public.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Lack 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. Job descriptions are subject to change by the Cooperative as the needs of MEC and requirements of the job change.

How to Apply

If interested, please download the application form at www.mountainelectric.com and include the following: 1) cover letter, 2) resume 3) contact information (including email) for 3 professional references. 4) Complete application for employment . Applications must be received by September 23, 2026. If you have any questions, please contact Dianne Cress 423-727-1809 or dcress@mountainelectric.com .