

# JEMEZ MOUNTAINS ELECTRIC COOPERATIVE, INC.

# SYSTEM ENGINEER

#### **1 OBJECTIVES**

- (a) To direct, guide, and assist in the electrical engineering activities of the Cooperative, by applying power engineering technical knowledge, sound judgment, and practical skill to ensure that the electrical transmission, substation, and distribution system meets the RUS engineering and operational guidelines..
- (b) To provide accurate data and recommendations to the General manager, Director of Engineering and Line Operations (DoE), consulting engineers and other departments for the purpose of determining the electrical systems present and future requirements.
- (c) To maintain the requirements of the RUS Form 300.

# 2 **RESPONSIBILITIES AND AUTHORITIES**

- (a) Participate in the development of JMEC's engineering and line operations policies and procedures.
- (b) Responsible for producing the input data for JMEC's Long Range Plan, Two or Four Year Work Plan, Sectionalizing Study, etc., as required by the Rural Utilities Service (R.U.S.) guidelines.
- (c) Administers completion of the Borrower's Environmental Report (B.E.R) for all Work Plan amendments, as required by R.U.S
- (d) Responsible for coordinating the studies noted above by the consulting engineers with JMEC's General Manager, DoE, and Line Operations staff.
- (e) Develops routine studies relating to over current protection and device coordination, over voltage protection, voltage improvement, power factor correction, load balancing and system reliability. Works with and provides input data for the consulting engineers for the more complicated studies
- (f) Works closely with the DoE and Line Operations staff to set priorities for construction of system improvements in the current Work Plan, constantly reviews the plan for needed modifications or additions, prepares Work Plan Amendments as needed and seeks R.U.S. approval of any Amendments.
- (g) Maintains records on substation and Feeder metering load data by working with other JMEC staff. This data is paramount for most JMEC engineering and rate studies.
- (h) Develops a root-cause analysis for all major power outages in coordination with Line Operations staff.
- (i) Reviews information gathered from monthly substation readings, engineering, operations personnel and members/customers to pinpoint problems on the electrical distribution system; makes recommendations to eliminate problems and improve reliability where possible.



- (j) Assists in the design of power systems to serve subdivisions and large commercial and industrial customers to ensure that they are electrically and economically well designed and are in accordance with good engineering practices and R.U.S. specifications.
- (k) Obtains estimates from consulting engineering firms, contractors and/or vendors for needed services or assistance and seeks approval from the DoE or General Manager.
- (1) Supports the implementation of the Construction Work Plan projects throughout the system.
- (m) Assists the Director of Finance in preparing the department's budget by providing plans and data regarding Work Plan projects, system improvements, special equipment requirements and automated system needs for the coming year.
- (n) Develops or updates specifications and assist in evaluating material quotes and makes recommendations to the DoE or Purchasing Agent regarding the purchase of power transformers, distribution transformers, voltage regulators, electronic reclosers, switching devices and equipment, underground cable and other equipment or materials to be used on the Cooperative's system.
- (o) Requests approval from R.U.S. to purchase special material items not on the Approved List of materials and requests waivers to purchase items that do not meet requirements included in R.U.S. specifications or bulletins.
- (p) Maintains active membership in the New Mexico Rural Electric Engineers Association and stays abreast of all associated standards and developments regarding the application of electrical equipment, devices, cables, etc., as they apply to the Cooperative's electrical system.
- (q) Directs and works closely with Line Operations Staff including Operations Manager, Line Superintendent, Linemen, Substation Technician, and vendors to maintain a reliable electric utility grid.
- (r) Provides guidance and/or assistance in planning, development, integration maintenance of the GIS/Milsoft system by working closely with engineering personnel and other departments, manufacturers and vendors. Makes recommendations to the DoE regarding future upgrades or integration of the many Cooperative software systems.
- (s) Works with engineering and line operations personnel, sales engineer and manufacturer's representatives to prepare specifications, resolve problems and investigate new product developments and technologies as they relate to the Cooperative's electrical and automation systems.
- (t) Works closely with staker estimators and provides general guidance on new line extensions. Mentors the staker estimators on principles of power engineering and design so they understand as to why line extensions are designed as such.
- (u) Works with engineering and line operations personnel to plan and implement alternate feed arrangements, switching operations to allow for voltage conversion, planned maintenance and power restoration.
- (v) Works closely with Billing and metering staff on customer related inquiries including high usage, PV installations, net metering, etc.



# **3 RELATIONSHIPS**

#### (a) Internal

- (1) Under the direct supervision of the Assistant General Manager / Manager of engineering and line operations: To inform, advise, and make recommendations to and receive directives from.
- (2) Department Directors/Management Team: To provide information to and receive information from. To work with in carrying out the day-to-day activities and operation of the Cooperative. To collaborate with in the formulation of and improvement of Cooperative processes and procedures.
- (3) All Jemez Mountains Electric Cooperative Employees: To lead and motivate in the delivery of exceptional service (product service and customer service). To encourage the exchange of ideas for improving customer service and the safety of all employees.
- (b) External
  - (1) Members/Customers: To courteously answer inquiries, to make every effort to gain their increased understanding and acceptance of JMEC's requirements and procedures.
  - (2) Industrial and Commercial Customers: To provide technical and reliability information regarding JMEC's electrical system and assist in resolving issues regarding reliability and power quality.
  - (3) Consulting Engineers: To consult with and furnish information to as needed in the planning and design of JMEC's electrical transmission, substation, and distribution system.
  - (4) R.U.S.: To follow requirements and procedures for all RUS bulletins.
  - (5) Tri-State G&T: To coordinate with in the delivery of utility and transmission service, programs, policies and procedures.

#### 4 EDUCATION

A Bachelor of Science Degree in electrical Engineering (B.S.E.E.) is required. Registration as an Engineer in Training (E.I.T.) or Professional Engineer (P.E.) in the state of new Mexico is preferred. Additional training in Rural Utilities Service (R.U.S.) Work Order and Loan Procedures is preferred.

#### 5 EXPERIENCE

A minimum of three (3) years' experience with an electrical distribution system, preferably an electric Cooperative system is required. Additional experience as an E.I.T. or P.E. is preferred.

#### 6 JOB KNOWLEDGE

Must have an understanding of electrical transmission, substation and distribution system design and operation. Must have excellent communication skills, proven leadership ability and a strong commitment to teamwork to attain the Cooperative principles. Should have a



good knowledge of management principles, including planning and organization, budgeting, and supervision. Should have a good understanding of the Cooperative's policies, procedures and rates.

# ABILITIES AND SKILLS

- (a) Must have excellent communication skills, strong commitment to teamwork and the Cooperative principles. Must have planning and organizational skills, and a good understanding of the JMEC's policies and procedures. Demonstrates a commitment to customer service at all times. Works well with others and provides courteous, efficient service to Member/Customer, Board Trustees, Management Staff and Employees.
- (b) Identifies and resolves problems in a timely manner.
- (c) Pursues training and development opportunities to continuously build knowledge and skills.
- (d) Speaks clearly and persuasively, listens to clarification, and effectively responds to questions.
- (e) Writes clearly and informatively; drafts and compose business and technical letters and communications.
- (f) Serves as a contributing member of the management team in carrying out JMEC's goals and objectives. Remains open to the viewpoint of others and welcomes feedback.
- (g) Treats others with respect, keeps commitments, accepts responsibility for actions, inspires trust, works with integrity and upholds the values of the organization. Uses sound judgment and is discreet concerning sensitive matters; maintains confidentiality when required.
- (h) Must have a valid New Mexico driver's license.

#### 7 WORKING CONDITIONS

Work is both inside and outside to effectively monitor and manage the electrical utility grid. Position involves occasional exposure to inclement weather while assisting in the restoration of power outages. Position requires travel, extended work hours, weekend and night work and 24-hour call-out (exempt position requiring non-traditional hours) primarily when supporting line operations staff during power outages or other utility grid system emergencies.

#### 8 OTHER

Salary is dependent on job experience and skills.

The position is headquartered in Hernandez, New Mexico.

Applications will be accepted until filled, and should be directed to:

Tina Trujillo Archuleta , Manager of Administration and External Affairs P.O. Box 128 Española, New Mexico 87532 505-753-2105 Ext. 1151 <u>ttrujillo@jemezcoop.org</u>