

CLASS TITLE: Senior Electrical Engineer

CLASS FUNCTION: To provide leadership and direction for those responsible for engineering, load management, and technical services functions. To assure that the electrical facilities of the cooperative are constructed, maintained and operated to accepted industry standards in accordance with sound engineering design. To assure that electric facilities meet applicable standards and safety/code requirements. To assure adequate planning, including long- and short-range plans, and programs for the orderly development of distribution and substation facilities. To provide expertise for day to day questions, concerns and issues.

REPORTING RELATIONSHIPS:

- Reports to: Manager – Operations & Safety
- Supervises: Engineering Assistant and Distribution Design Technician

EXAMPLES OF DUTIES: (illustrative, not inclusive)

- Coordinate with Operations and Support Services to develop an annual work plan and budget; assist with annual budget preparation and justification;
- Assist in the siting, construction and maintenance of substations and the testing and inspection of equipment within the substation;
- Investigate, evaluate, specify and assist in selecting equipment to be used in providing service to the members;
- Conduct feasibility studies and cost/benefit analysis for various projects being contemplated by the Cooperative such as load management systems, data acquisition, distribution automation systems and other systems or software with capability of keeping rates low and/or improving member satisfaction;
- Conduct engineering studies to evaluate and improve system coordination, develop alternatives and make recommendations for system expansion required to meet the growing demand and energy needs to members;
- Possess a working knowledge of the installation and maintenance of the communication systems necessary to operate the SCADA / Load Management system;
- Develops long- and short-range work plans, including plans, specifications and costs for the construction of distribution and substation facilities;
- Maintain engineering analysis model (NISC Distribution Analytics & MDM, MilSoft WindMil and Light Table);

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- Correspond with connected and business partner utilities on operating and planning matters;
- Participate as a technical advisor to the Technical Services as needed in the field and in developing and implementing a proactive program to address NEV issues;
- Possess a working knowledge of load management (LM), automated meter reading (AMR), distribution/substation automation (SCADA) systems, communications systems and develop a familiarization of related technologies;
- Reviews construction projects to assure compliance with the NESC and cooperative service requirements;
- Assists with technical support and provides guidance to Distribution Design Technicians in the design and layout of construction projects as needed – particularly with large power loads;
- Provides training and developmental opportunities for the staff of the engineering/operations department;
- Other duties as assigned.

The above statements are intended to describe the general nature and level of work being performed by people assigned to this classification. They are not intended to be construed as an exhaustive list of all responsibilities of personnel so classified.

KNOWLEDGE, SKILLS AND ABILITIES:

- Shall have a thorough knowledge and be familiar with distribution system components and their functions;
- Shall possess the ability and knowledge to conduct coordination, voltage drop, motor starting and capacitor/regulator placement studies;
- Must have knowledge of and the ability to use computers and various software packages. Ability to use engineering software, AMR system software; database system such as Access, spreadsheets such as Excel and word processing such as Word;
- Must have the ability to communicate technical information to those who have limited technical knowledge;

- Shall possess good teamwork skills;
- Shall possess the ability to attain identified goals in a self-directed manner;
- Must have the ability to recognize and analyze problems and identify creative, cost effective solutions;
- Must have good communications abilities to assist members with concerns and to help them understand the basics of electricity and electrical system operation;

EXTERNAL RELATIONSHIPS:

- Members – Consumers
- Dealer and Vendors Representatives
- Consultants
- Government (Local, State and Federal)

NECESSARY QUALIFICATIONS:

Bachelor of Science degree in Electrical Engineering;
Valid Driver's License;
Professional Engineer license.

DESIREABLE QUALIFICATIONS:

Ten or more years of engineering experience with electric distribution systems. Experience in conducting protection coordination studies, two-year work plans and ten-year long-range plans for a primarily rural electric cooperative; two years experience in on-farm NEV testing, and a familiarity with distribution line (overhead and underground) design.

PHYSICAL QUALIFICATIONS:

Work in both a climate-controlled office environment (80 – 90% of the time) and in an outdoor environment the balance of the time. The position will be required to work in an outdoor environment at all times of the year, occasionally including inclement weather. The position will be required to drive a cooperative vehicle (a pickup or similar sized vehicle) to any part of the Cooperative service territory to address member and employee needs.