



Position: System Engineer

Role: To serve as a vital member of the operations staff to ensure and maintain the integrity of the electrical distribution system. Engineering knowledge and judgement will be utilized to convey accurate information and necessary system requirements for both the present and future.

Reports to: Operations Manager

Oversees: Non-supervisory position

Responsibilities:

A. Operations

1. Serve as the system administrator for the SCADA system.
 - i. Monitor daily operations to maintain sound system functionality and usability.
 - ii. Build and map new views to easily convey data to operations personnel.
 - iii. Add new devices and respective point lists to the database.
 - iv. Teach others how to interpret data and interact with the SCADA system.
2. Offer technical support to operations staff in troubleshooting abnormal sequences and patterns in line loss figures.
3. Offer support and potential solutions to special equipment staff for the purpose of troubleshooting and alleviating power quality problems.
4. Communicate with line personnel. Assistance will be needed in protection coordination, transformer/service conductor sizing, and member complaint resolution.
5. Establish communication with all involved parties for large projects. Such projects may include the construction of a new substation or the safe energization of a large load.
6. Offer support to member services personnel for the purpose of distributed generation interconnections.

B. Planning

1. Contribute potential projects to the construction work plan based on sound engineering practices and judgement with an eye toward improved reliability and cost savings.
2. Offer technical recommendations on new load additions.

- i. Studies may include voltage sustainability, motor start flicker analysis, and voltage support.
 3. Prepare plans following studies regarding voltage profile improvement, phase balancing, power factor correction, system capacity, protective device coordination, and system protection.
 4. Routinely analyze the system for irregularities and potential problems using engineering analysis software.
 5. Assist in developing conceptual distribution layouts for commercial and residential developments.
 6. Assist in developing distribution system designs for system improvements.
 7. Assist in the engineering and implementation of substation modification projects.
- C. Record Keeping
 1. Maintain records of critical system equipment such as substation transformers, regulators, capacitors, and protective devices.
 2. Maintain and offer improvements for the Substation Emergency Restoration Plan. Contact information, critical equipment information, and action steps should be kept accurate to ensure a smooth recovery in the event of an emergency.
- D. Other Duties
 1. Develop a relationship with cooperative product/service providers to offer input and recommendations for improvement on tools and services.
 2. Keep the system model current to ensure accurate analysis.
 3. Perform other duties as assigned by the supervisor.

Required Talents, Skills, Education, and Expertise

Education and Related Experience

- Bachelor of Science Degree in Electrical Engineering – emphasis in Power Systems preferred. Previous experience in the utility sector is favorable.

Skills

- Strong communication skills required. Ability to effectively convey information in either written or verbal form to fellow employees, members, and the public is essential.
- Strong problem-solving skills are required. Ability to absorb information from multiple sources, recognize the problem, and form an action plan to alleviate said problem is crucial.
- Applicant must be self-motivated and detail oriented.
- Strong computer skills required.
- Applicant must have a strong desire to learn and progress with electric cooperative distribution design.