

# RESPONSIBILITY OUTLINE



<b>Job Title</b>	Substation Technician Apprentice		
<b>Department</b>	Substations	<b>Pay Status</b>	Hourly
<b>Reports To</b>	Substation Supervisor	<b>FLSA Category</b>	Nonexempt
<b>Location</b>	Various		

## SUMMARY

Assist with the inspection, installation, testing, maintenance, and repair of electric transmission and distribution substation equipment including power transformers, circuit breakers, switchgear, and various electrical and electronic systems with the majority of the duties involving working with circuits between 48 and 600 volts.

## Essential Responsibilities

Depending upon work assigned, incumbents will be required to perform some or all of the following responsibilities.

### Maintenance and Repair

Assist with the operation and maintenance of substations. Assist with maintenance testing, including insulation power factor, insulation resistance, contact resistance, turns ratio, high potential, current injection, breaker time/travel, and oil and gas analysis of circuit breakers, transformers, and other substation equipment.

Assist with maintenance of mechanical and electrical systems of transformers, circuit breakers, control panels, relay panels, low voltage alternating current (ac) and direct current (dc) circuits, batteries, battery chargers; and maintaining substation yard.

Assist with troubleshooting and repair of mechanical, electrical, pneumatic, and hydraulic stored energy systems and stand-by generators

Assist with the operation and maintenance of our oil reclamation equipment.

Participate in substation switching using established procedures during planned and emergency repairs under direct supervision.

### Construction

Assist with the installation of power transformers, circuit breakers, capacitor banks, reactor banks, circuit switchers, low voltage ac and dc systems, conduit and cable raceways, and grounding systems; pulling and terminating cables; and installing control and relay panels.

Assist with acceptance testing of related substation equipment and substation commissioning and provide test results for records.

Assist with the execution of construction activities for new substation equipment installations and upgrades of existing installations.

## **Compliance: Inspection, Documentation and Testing**

Assist with the periodic substation inspections and document findings and update records.

Assist with substation equipment testing of breaker controls and protection schemes.

Assist with periodic battery and charger testing.

Develop working knowledge of North American Electric Reliability (NERC) standards and procedures, Occupational Safety and Health Administration (OSHA) regulations, and Department of Transportation (DOT) regulations and maintain records and documentation as required.

Must comply with all Federal, State, and Local regulations including NERC Compliance, OSHA Compliance, and Environmental Compliance.

## **Safety**

Sunflower employees are expected to approach their personal safety and their coworker's safety with a positive attitude and commitment. Sunflower employees will maintain the highest level of responsibility and accountability in compliance with all safety policies, practices and procedures to ensure a safe working environment. This includes properly maintaining and caring for applicable safety gear and equipment; identifying, correcting or assisting in resolving safety concerns, including communicating all hazardous conditions; reporting all injuries and near misses immediately to appropriate personnel; and understanding and complying with the Clearance Procedure as applicable.

## **Culture**

Demonstrate personal responsibility and a commitment to Sunflower's culture and core values of technical competency, respect and dignity, accountability, integrity, trustworthiness, and servant leadership to empower or otherwise enable others to optimally perform their job responsibilities. Demonstrate and promote ethics and behaviors consistent with Sunflower's culture, Board policies, and business practices. Understand and fulfill the role and responsibility for all internal policies and procedures of the company to comply with laws, rules, and regulations.

## **Other Responsibilities**

Maintain vehicles, aerial devices, tools, equipment, and other work-related materials and ensure they are in proper working order.

Maintain an adequate inventory of parts and materials in the shop and on vehicles to support expected construction and maintenance activities.

Assist with providing as-built drawings and information in a timely manner.

Perform general housekeeping duties in and around the substations.

Assist relay, metering, and line technicians in the performance of their duties and responsibilities as needed.

Perform other tasks as assigned or required to support Sunflower's mission and operations.

## **Qualifications**

### **Certifications and Licenses**

Depending upon location of the position, may be required to obtain and maintain a commercial driver's license (CDL) within two years of date of hire.

### **Education and Experience**

Two year post high school technical certification in industrial electrical, instrument and control, or electronics; or equivalent combination of education and experience.

One year control circuit wiring and installation experience is preferred.

### **Knowledge, Skills, Abilities**

Successful completion of Edison Electric Institute's (EEI) Construction and Skilled Trades Selection System (CAST) Test.

Able to understand and comply with the Lock Out/Tag Out (LO/TO) Clearance System.

Able to understand and comply with testing the line or equipment for voltage potential and how to properly apply personal protective grounds.

Able to gain knowledge of common utility safety practices and become knowledgeable at implementing the safety practices.

Able to gain knowledge of both National Electrical Code (NEC) and National Electrical Safety Code (NESC) standards for the proper and safe installation of substation equipment and systems.

Able to understand basic electrical principles, like Watts, Vars, Amps, Ohms law, voltage drop, burden, resistance, and fuse sizing pertaining to substation systems.

Able to gain knowledge of alternating current (ac) and direct current (dc) theory and relaying protection schemes.

Able to learn and understand how to read and interpret one-line electrical drawings, ac schematics, wiring diagrams, switch maps, instruction manuals, and construction and manufacturers' drawings and specifications related to the substation control and protective relay equipment.

Able to assist with troubleshooting, identifying, and resolving problems in a timely manner by using sound judgment.

Knowledge of and able to operate basic hand tools and power tools.

Able to gain knowledge to operate test equipment and software and interpret test results.

Strong attention to detail on all tasks including planning, coordinating, and organizing supplies and equipment for the electrical wiring, installation, and maintenance of substation equipment.

Able to gather and analyze information.

Must be a self-starter and able to work independently.

Written, verbal, and interpersonal communication skills at the level required to successfully perform the essential responsibilities of the position.

Able to operate computers and associated programs at the level required to successfully perform the essential responsibilities of the position.

### **Other**

Possess and maintain a valid driver's license.

Able to travel to all Sunflower sites and attend training and meetings out of state as needed.

Regular and prompt attendance is required.

Able to work overtime, both scheduled and/or unscheduled. Able to respond and report to work during off hours in emergency situations.

### **Promotion Requirements**

Employees are expected to progress through the training during the prescribed time period to the journey level as a condition of employment per the standards of training for the craft of substation technician.

This outline is not all inclusive but rather serves as a general overview of the current business needs. Experience guidelines are not the sole basis for awarding this position and substitutions may be made as they relate to the essential functions, duties, and responsibilities of this position.

<b>EEO Category</b>	6	<b>FLSA Exemption</b>	N/A
<b>FLSA Exemption Justification</b>	N/A		

## COMPETENCIES

The following competencies describe the required knowledge, skills, and behaviors that contribute to employee performance and organizational success. Please contact the Department of Organizational Development for definitions of each competency.

### Core

- Technical Competency
- Respect and Dignity
- Accountability
- Integrity
- Servant Leadership
- Safety

### Technical

- Communication
- Decision Making
- Flexibility
- Initiative
- Problem Solving
- Quality
- Team-Oriented
- Technology Acumen

## PHYSICAL AND MENTAL REQUIREMENTS SHEET

This outline is not all inclusive but rather serves as a general overview regarding the physical and mental activities required to perform the job.

### Physical Tasks and Exposure

For the following, indicate if the task or exposure during a typical shift is:

**Occasional** (0-33% of the workday); **Frequent** (34-66%); **Constant** (67-100%)

Task/Exposure	O	F	C
Standing		X	
Walking		X	
Sitting	X		
Climbing	X		
Crouching	X		
Twisting			X
Reaching above		X	
Heights over 4 ft		X	
Confined spaces	X		
Variable weather			X
Cold			X
Heat			X
Noise over 85 decibels	X		
Dust/Dirt		X	
Ionizing radiation		X	
Chemicals	X		
Repetitive - Wrist		X	
Repetitive - Elbow		X	
Other: Driving			X

Task/Exposure	O	F	C
Lifting/Lowering			
<10 pounds			X
11-30 pounds			X
31-50 pounds		X	
Carrying			
<10 pounds			X
11-30 pounds			X
31-50 pounds		X	
Pushing			
<10 pounds			X
11-30 pounds			X
31-50 pounds		X	
51-75 pounds		X	
>75 pounds	X		
Pulling			
<10 pounds			X
11-30 pounds			X
31-50 pounds		X	

Comments: May require awkward position of head and neck. Some working in enclosed spaces. Able to use cause and effect judgement. Working around high voltages may cause interference with pacemakers.

For the following, indicate if essential to the position:

Mental Requirements	
Works alone	X
Repetition	X

Audio/Visual	
Hearing/Corrected Hearing	X
Color discrimination	X

Required Examinations			
Physical Capacity Profile (PCP)			Audiogram
Level 2			Chest X-Ray
Level 3	X		Spirometry
Level 4			Color
Level 5			DOT Physical

A physical may be substituted for a PCP if it is not available.