# ELECTRICAL SAFETY

**Scope and Applicability Statement**
This document provides general safety procedures and regulatory guidance for employers and workers in accordance with U.S. Occupational Safety and Health Administration (OSHA) standards under 29 CFR 1910 and 29 CFR 1926. These procedures apply to all workplaces where they are implemented as part of a comprehensive safety program.
**Customization and Compliance Statement**
Employers are responsible for ensuring compliance with all applicable local, state, and federal safety regulations. Workers must adhere to established safety protocols to prevent workplace injuries and illnesses.

**Purpose**

The purpose of this Electrical Safety program is to establish procedures for the safe use of electrical equipment and tools in the workplace.

**Scope**

This program applies to all employees who work with or near electrical equipment. Contractors providing electrical services must follow their written electrical safety procedures.

**Definitions**

- Affected Personnel: Workers who use electrical equipment but do not perform repairs or lockout/tagout procedures.
- Circuit Breaker: A device designed to interrupt a circuit in response to an overcurrent condition.
- Disconnecting Means: A device or group of devices that allows for disconnection of electrical circuits.
- Ground Fault Circuit Interrupter (GFCI): A device designed to interrupt an electric circuit when a fault current exceeds a predetermined level.
- Qualified Person: A worker trained in the repair, construction, and operation of electrical equipment, as well as the hazards involved.
- Class I Locations: Areas where flammable gases or vapors may be present in sufficient quantities to produce explosive mixtures.
- Class II Locations: Areas where combustible dust may create hazardous conditions.

**Responsibilities**

**Safety Director:**

- Develop and maintain electrical safety programs and procedures in compliance with OSHA requirements.

**Superintendent:**

- Ensure that only qualified employees and contractors perform electrical repairs or installations.
- Implement and maintain electrical safety programs at work sites.

**Employees:**

- Use electrical equipment, tools, and appliances safely.
- Attend required training sessions and report unsafe conditions.
- Only qualified persons may work on energized electrical circuits.

**Safe Work Practices**

- Workers must use proper protective equipment and follow safety procedures when working near energized circuits.
- Electrical equipment, tools, and appliances must be inspected before each use.
- Faulty equipment must be removed from service and tagged as "Out of Service."
- Repairs to electrical cords and equipment must be performed only by qualified personnel.
- Employees must maintain a safe working distance from exposed energized parts.

**Extension Cords and Outlets**

- Only grounded three-wire extension cords may be used.
- Cords must be rated for hard service and inspected daily.
- Cords must not be run through doorways, under carpets, or across aisles where they pose a tripping hazard.
- Multiple outlet boxes must not be used to power high-current devices such as space heaters and coffee makers.

**Overhead Lines**

- Workers must maintain a minimum clearance of 10 feet from overhead power lines.
- Vehicles and equipment must not operate within 10 feet of energized lines unless protective measures are in place.

**Confined Spaces and Work Areas**

- Employees working in confined spaces with electrical hazards must isolate energy sources and use proper illumination.
- Protective barriers or shields must be used where necessary.
- Distribution rooms must be kept clear of combustible materials and marked with warning signs.

**Lockout/Tagout (LOTO)**

- Lockout/tagout procedures must be followed before performing electrical work.
- Employees must treat de-energized parts as live unless locked out and tested.
- Only authorized personnel may perform LOTO work on electrical equipment.

**Energized Electrical Work**

- Work on energized electrical systems is only permitted under specific conditions where de-energizing would introduce additional hazards.
- An Energized Electrical Work Permit must be obtained and approved before performing live electrical work.
- Workers must use appropriate arc flash and shock protection, including insulated tools and PPE.

**Grounding and Assured Equipment Safety**

- Ground fault circuit interrupters (GFCIs) must be used for all portable electric tools and extension cords.
- An assured equipment grounding program must be implemented, including quarterly inspections and color-coded tagging.

**Fire Extinguishers**

- Approved fire extinguishers must be available near electrical distribution areas.
- Water-based fire extinguishers must not be placed within 50 feet of electrical equipment.

**Electric Shock and CPR**

- Employees must not touch an injured worker in contact with a live circuit until it is confirmed that the circuit is de-energized.


- CPR should be administered if the injured worker is unresponsive, and emergency services must be contacted immediately.

**Personal Protective Equipment (PPE)**

- Employees must wear non-conductive head protection and face shields where electrical hazards exist.
- Insulated gloves and tools must be used when working on energized circuits.
- Protective barriers must be in place to prevent accidental contact with live parts.

**Training Requirements**

- Employees who may be exposed to electrical hazards must receive appropriate training.
- Qualified workers must be trained in lockout/tagout, safe work practices, and approach distances.
- Training records must be maintained and available for inspection.