Electrical Safe Work Practices

5-Minute Talk

Overview of topic

You need to instill in your employees a healthy respect for electricity and its power. Safe work practices are essential. Training can ensure your employees recognize electrical hazards and use safe work practices to control or eliminate those hazards.

Safe work practices include:

- deenergizing electric power circuits and/or equipment before working near, inspecting, or making repairs.
- using electric tools, extension cords, and other equipment, that is in good repair.
- using good judgment when working near ener-gized lines (including underground and overhead lines).
- using appropriate protective equipment.

Deenergizing electrical equipment

The accidental or unexpected starting of electrical equipment can cause severe injury or death. Employees must not work near any part of an electric power circuit that they could contact during their work, unless protected against shock by deenergizing the circuit and grounding it or by guarding
it effectively.

Tags must be placed on controls that are to be deactivated during work on energized or deen-ergized equipment or circuits. Equipment or circuits that are deenergized must be rendered inoperative and have tags attached at all points where such equipment or circuits can be energized. Employees must:

- Respect warning signs, fences, cages or other barriers for special electrical hazards.
- Repair only those items they are authorized to repair.

Tools

To maximize their safety, employees should always use tools that work properly. Employees must:

- Maintain electrical equipment according to manufacturer and company standards.
- Regularly inspect tools, cords, grounds, and accessories.
- Use safety features like three-prong plugs, double-insulated tools, and safety switches. Keep machine guards in place and follow proper procedures.
- Extension cords are more vulnerable to damage; use and maintain them properly. Never use worn or frayed extension cords.

Underground and overhead lines

Where the exact locations of underground lines are unknown, employees using jackhammers or hand tools that may contact a line must be provided with insulated protective gloves.

If work is to be done near overhead power lines, the lines must be deenergized and grounded or other protective measures must be provided before work is started. Unqualified employees and mechanical equipment must stay at least 10 feet away from overhead power lines. For voltages over 50,000 volts, the clearance should be increased by four inches for each additional 10,000 volts.

Protective equipment

Employees who are required to work with electricity must use the personal protective equipment required for the job they perform. The equipment may consist of rubber insulating gloves, hoods, sleeves, matting, blankets, line hose, and protective helmets.

Employee training

No specific training requirements are mentioned in the electrical standard. However, you must always 'instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness
or injury.

Training tips

Demonstrate methods for insulating overhead lines and ensuring underground utilities are marked before digging.

Where to go for more information

Regulatory text: 29 CFR 1926.400-.449

National Electrical Code, National Fire Protection Association

Regulatory text 29 CFR 1926.21(b)(2)—Safety training and education, employer responsibility