CIRSA HAZARD ALERT

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Hazard Alert - Electrical Safety

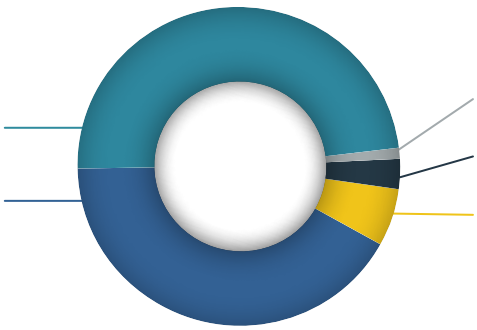
Electricity is key to our everyday work and personal lives. With that in mind, we should never take for granted the serious potential hazards commonly associated with this source of power. This CIRSA Safety Alert discusses electrical safety, causes of electrical fatalities, and best practices that will help reduce the risk of work-related injuries arising from electrical exposure.

Electrical Hazards in the Office and the Field

According to the United States Consumer Product Safety Commission (CPSC), top electrical safety hazards include electrical fires caused by aging wiring and misuse of surge suppressors and include electrocutions from wiring systems and large appliances. Electricity causes more than 40,000 fires every year in the United States, resulting in hundreds of injuries and deaths. Within your organization, employees should always consider safe practices when utilizing extension cords, power strips, and surge protectors. Employees should also be aware of potential electrical accidents that can result from faulty and/or defective equipment.

Electrical Fatality Causes as Reported to OSHA Between 2011 to 2022. *(Source)*

- **48%** Working On or Near Energized Wires or Parts
- **41%** Contact with Overhead Power Lines



- **1%** Arc-Flash/Blast
- **3%** PPE Issue
- **6%** Lockout/Tagout Safety Devices Removed

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Electrical Safety (cont.)

Electrical Safety Practices to Implement in Office and Field Settings

The following are some suggested best practices to further electrical safety in office and field settings:

- Disconnect circuits and office-related equipment from all electric energy sources if not in use or attended to.
- Treat all electrical conductors as if they are always energized.
- Use lockout devices to prevent a circuit from becoming energized.
- De-energize electrical circuits before performing any type of work.
- Replace loose or frayed cords on all electrical devices.
- Avoid running extension cords across doorways or under carpets or rugs.
- Avoid overloading outlets. Consider plugging only one high-wattage appliance into each receptacle outlet at a time.
- Check for outlets that have loose-fitting plugs, which may lead to arc-flashing and/or fires.
- Never attempt to repair or splice a cut cord yourself. "Electrical tape," as commonly referred to—usually black vinyl tape—is not rated for the heat generated by electricity running through wires. The tape will melt and burn.
- Never force a plug into an outlet. Plugs should fit securely into outlets but should not require much force to fit.
- A heavy reliance on extension cords is an indication that you have too few outlets to address your needs. Have additional outlets installed where you need them.
- Not all power strips are surge suppressors, and not all surge suppressors can handle the same load and events. Be sure the equipment you are utilizing matches your needs in the office and the field.
- The only people that should do electrical work are Qualified People who have the skills and expertise necessary to distinguish exposed energized parts from other parts of electric equipment. Always ensure work is performed by licensed electricians when required by applicable code and confirm licensing status for contractors performing work for your entity.
- Unqualified People should not work on energized parts and should always stay at least 10' away from energized parts.

Additional Resources

https://www.sorm.state.tx.us/risk-management/office-safety/office-electrical-safety/

https://www.cdc.gov/niosh/electricalsafety/about/?CDC_AAref_Val=https://www.cdc.gov/niosh/topics/electrical/

https://ireportsource.com/blog/7812-2/

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