

Toolbox Talks 2

065: Unsafe Acts: Temporary Power and Light

Discussion leader duties for this session:

Review NEC Article 590.
Review the Article 100 definitions of grounding and bonding.

What this Safety Talk covers:

Most injuries occur not due to unsafe conditions, but due to unsafe acts. This Safety Talk addresses some unsafe acts related to temporary power and light.

Discussion notes:

Temporary power and light myth answered

It's not true that you can ignore the standard wiring rules because the power and light are temporary. Generally speaking, the NEC rules for wiring in Chapters 1 through 4 also apply to temporary power. The major difference is you are using portable cords without raceways instead of wiring in raceways. Because of this difference, some *additional* safety rules apply.

Unsafe acts with temporary power and light

- Violating Article 230 when bringing power to a site. This is especially a problem on small projects. The NEC requires you to treat a service as permanent, even if it's temporary [590.4(A)]. The same applies to feeders and branch circuits.
- Ignoring the support requirements for temporary cables and cords. These aren't supported or protected by raceway, so you must provide support and protection.
- Routing flexible cords haphazardly. Route them away from sharp edges, stairs, foot traffic, water, combustibles, and any processes that may damage them. Provide additional mechanical protection as needed.
- Using unprotected lamps. Article 590 requires protecting lamps from accidental contact or breakage, to prevent shock.
- Using inadequate light. Temporary lighting doesn't have to be poor lighting. It needs to be adequate for the work being done.
- Not testing GFCIs before use. If a GFCI fails, it can provide power even if it no longer provides GFCI protection. Test GFCI cords and receptacles before use.
- Grounding, rather than bonding. The NEC and OSHA both use the word "grounding" to mean "bonding" even though the definitions are clear in Article 100 of the NEC. You eliminate differences of potential only through bonding (creating a metallic path), not grounding (connecting to the earth). Driving a ground rod does not create a "ground" for the purposes of personnel protection or equipment "grounding."
- Using a generator indoors without providing an exhaust means that keeps fumes from the work area.
- Refueling a generator in a manner not consistent with the manufacturer's instructions. Some generators have very specific safety precautions to follow during refueling. Know what they are for your particular generator.
- Storing generator fuel in unapproved containers. This violates federal law and presents hazards of both fire and explosion.

Review and discussion

1. Generally speaking, the rules of NEC Chapters 1 through 4 apply to temporary wiring. Why would this be the case? *[Note to Presenter: Electricity doesn't pose less of a hazard just because it's being supplied on a temporary basis. In fact, because temporary wiring consists of cables and cords, additional care must be taken.]*

- Participant's Signature and Date***

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