

Toolbox Talks 2

095: Unsafe Conditions: Power Lines

Discussion leader duties for this session:

Review any company safety information that addresses working around power lines.

What this Safety Talk covers:

This Safety Talk addresses conditions that can make power lines unsafe to be around.

Discussion notes:

Unsafe conditions related to power lines

- Crane is operating without adequate clearances. Don't wait until you see the crane boom swing into an energized power line. At the start of the job, ask who gave the crane operator the OK. Was this a qualified person? The foreman is typically the one who looks into this. So follow up with your foreman to make sure this happens.
- Overhead line clearances not accurately determined. Your foreman should review the process by which the clearances were determined. If this was done purely by the drawings, it's wrong. Ask your foreman if this review was completed.
- Proper PPE for overhead line work not available. Don't go on without it. The required PPE may be all that stands between you and electrocution.
- Buried cable survey is out of date. This survey may be required for any number of tasks. Most of these will involve some kind of excavation. Trenching is a common task for which a buried cable survey is required. Review the survey information to make sure it's current.
- Buried cable survey doesn't cover whole area. If soil hasn't been surveyed, don't dig.
- Line de-energization not verified. You may have been notified that the line has been de-energized. That doesn't mean the line is now at zero volts. The only way to know is to measure the voltage on that line. Note that only a person qualified to work at the nominal voltage of that line can make such a measurement. This person must also be wearing the appropriate PPE and using test equipment rated for the voltage. Don't use your DMM to test a utility power line.
- De-energized lines not grounded. Power lines can still deliver a lethal shock even after they measure zero volts. How can this be? It can happen for several reasons, including backfeed. The only way to prevent this is to apply a means of shorting the line to ground. Only a person qualified in this safety step should perform it.
- Power line ground is removed. Look carefully at what actually needs to be disconnected, and provide temporary bypasses as needed. In residential applications, an open ground or neutral is a potential electrocution hazard. In industrial applications, an open ground leaves you vulnerable to lightning-induced surges.
- Area not properly roped off. This is more for the protection of others than of yourself. But that leads to our final item.
- Unauthorized personnel in work area. If overhead work is involved, you don't need people distracting the crane operator. If buried cable is involved, you don't need distractions if you're trenching.

Review and discussion

1. When is a good time to ensure the crane clearances are correct?

