



The Power of Overhead Power Lines

Overhead power lines are dangerous. Fatalities are many times the end result of contacting an energized overhead line. The most common types of equipment involved in power line related fatalities are cranes and boom trucks. However, underground contractors (water, sewer, pipeline and communications) frequently contact these overhead lines. High reaching equipment such as excavators, drilling rigs, backhoes, aerial lifts and concrete pumps present similar hazards to cranes when operated near overhead power lines. Their reach can allow them to contact a power line. Each of these pieces of equipment requires skilled operators. Working near overhead power lines adds something else to the project that must be closely monitored.

Before beginning the job, survey the work area and note all the power lines at the job site — this includes locating both underground and overhead power lines. Then identify the activities you'll be doing that could result in a contact. Analyze these activities and determine how to eliminate or reduce the risk of electrocution.

On most projects there are four options for eliminating or reducing the hazard. They are:

- Move the activity
- Change the activity
- Have the utility company de-energize the power line
- Have the utility company move the power line

Regardless of the option you choose for the job, pre-planning is key.

OSHA has established safe working distances that must be maintained from any energized power line. These distances require that no object may enter from any direction. This includes personnel, crane booms or lines, excavation equipment, etc. For power lines operating at 50 kilovolts (kV) or less, all objects must remain at least 10 feet away. For lines operating at voltages greater than 50kV, the line clearance distance is increased. Check the code or contact the electrical company for exact distances.

What should you do if the equipment you are operating contacts an energized line?

The first choice is to stay on the equipment until the line has been de-energized by the power company. Only in an extreme case, such as fire, should you leave the equipment. If you must, jump clear of the equipment landing on both feet, with both feet close together. Then shuffle in very small steps away from the energized equipment. As an alternative, you can "bunny hop" away from the equipment. By keeping your feet together, you lessen the chance of one foot being in an area of high potential and the other foot in an area of low potential. Spreading your feet out is a recipe for electrical shock, since stepping from an area of high potential to an area of low potential allows the electricity to flow through your legs causing injury or death. Electrical current can flow outward from the equipment through the soil in a ripple pattern, putting your co-workers on the ground at risk also.

Stay safe and look *UP* when working near overhead power lines!

