

## OSHA Power Line Safety – Field Training

Power lines require a lot of attention when working under or around them. If not treated with respect, they can be deadly. Not only is it safe and smart, but it is also an OSHA regulation.

Powerline safety is found in OSHA 1926.1408. This section covers the requirements OSHA has for working around overhead powerlines and working under powerlines.

OSHA 1926.1408(a) tells us we must do the following on our jobsite to comply with regulations.

- a. We must identify the area that our equipment will be operating in as it pertains to power lines. In other words, we need to look at every location where our equipment can come in contact with a power line both as they cross the work area and where they run alongside the work area.
- b. We must determine if we will ever work closer than 20 feet of a power line.
- c. If we see that we will need to work within 20 feet of a power line, we are required to use one of 3 options. That means any part of our equipment can get within 20 feet of the energized line.

**Option 1.** If within 20 feet of a power line you can opt to have the utility company deenergize the line and visibly ground it. Once it is deenergized, it is safe to do what ever we need to do. This option would be great, but it is generally not practicable to do. But you never know, they may be able to kill the line and feed the neighborhood from another direction.

**Option 2.** Ensure that not any part of the equipment (**NO PART**) will ever get within 20 feet of the power line, this includes horizontal or vertical distance. If you decide that Option 2 is how you will protect your employees, **you are required to do all of the following.**

- a. **OSHA 1926.1408(b)(1)** Conduct a planning meeting with the operators and the other workers who will be in the area of the equipment or load to review the location of the power lines, and the steps that will be implemented to prevent encroachment or electrocution. **That includes truck drivers using dump beds.**
- b. **1926.1408(b)(2)** If lifting equipment is used to move a load (could be excavator moving barriers, forklift, crane) you must ensure the tag lines are non-conductive.
- c. **1926.1408(b)(3)** Erect and maintain an elevated warning line, barricade, or line of signs, in view of the operators, equipped with flags or similar high-visibility markings at a location at least 20 feet from the power line.

NOTE: if the operator or driver cannot see the warning signs or other protection, a spotter must be provided to watch the power line. Dedicated spotter.

- d. **1926.1408(b)(4)** You must use one of the following.
  1. Use a proximity alarm that sounds an alarm in the equipment or truck when the operator approaches the distance.

2. Use a dedicated spotter who is always in continuous contact with the driver or operator. The line must be marked so that the spotter can determine when the equipment or load is encroaching.

The Spotter must be positioned where he has a clear view of the markings and line. Use whatever necessary means that are required to allow the spotter to communicate with the driver/operator.

Give updates to the driver/operator so that they never encroach.

3. Use a range warning device or other such range control device. The device must be set to give the operator/driver sufficient warning to prevent encroachment.
4. A device that automatically limits the range of movement set to prevent encroachment.
5. An insulating link between the end of the load line and the load (crane work).

**Option 3.** This option uses a table to give minimum distances from power lines based on the voltage in **Kilovolts**. So, to use option 3 you would need to contact the utility company and determine the voltage of the lines in your area.

If no part of the load, equipment, or anything else will ever have the possibility of getting within the given distance then your good.

When using option 3, the utility owner/operator of the power line must provide voltage information within 2 days.

### **Table A.**

<b>Up to 50 KV</b>	<b>10 feet</b>
<b>Over 50 up to 200 KV</b>	<b>15 feet</b>
<b>Over 200 up to 350 KV</b>	<b>20 feet</b>
<b>Over 350 up to 500 KV</b>	<b>25 feet</b>
<b>Over 500 up to 750 KV</b>	<b>35 feet</b>
<b>Over 750 up to 1000 KV</b>	<b>45 feet</b>
<b>Over 1000 KV, you must have the utility, or a PE tell you your safe distance</b>	

### **What to do if you or someone hits a power line.**

If you are in a truck or a piece of equipment – always assume the vehicle and the area around the vehicle is electrified.

If the vehicle or equipment is not on fire.

1. **Stay in your vehicle.** The ground may be electrified. You could be electrocuted by just stepping out on the ground. NEVER STEP ON THE GROUND AND TOUCH THE VEHICLE.
2. **Call 911** and/or the power company. If you don't have a phone, stay in the vehicle, and tell anyone trying to walk up to you "STAY AWAY". Have them call 911.

3. **Do not try to drive or pull away** from a power line or pole. You could cause more damage or make the situation more dangerous to those around you.

**If the equipment or vehicle catches fire- make an emergency exit.**

If a fire starts in the vehicle you will need to exit the vehicle. This requires some thought and caution to ensure you are not electrocuted.

1. Stay seated and open the door completely, look to make sure no wires are exposed that you could touch or hit.
2. Stand up in the door frame with your feet together and arms crossed.
3. **Jump from the vehicle as far as possible**, keep your arms crossed and feet together. Never touch the ground and the vehicle at the same time.
4. Keep your feet together. Separating your feet allows electricity to flow from one foot through your body to the other foot. This can cause serious injury or death.
5. **DON'T RUN: Hop** at least 30 feet from the location of the wire/vehicle, then slowly slide your feet apart. If when you are hopping or stopped, if you can feel tingling from the electricity, keep hopping away a little farther.
6. Call 911/or power company and keep everyone away from the area.