# Overhead Power Lines

# Safety Meeting Packet





Every year workers are injured or killed from accidental contact with live overhead power lines that transmit electricity. People may also be harmed when a flashover occurs from a person or an object getting too close to a line. Employees using equipment like metal extension ladders, lifts, and scaffolds that may encounter overhead power lines may be at risk for injury.

Activities that may cause interference with overhead power lines:

- Operation of cranes, forklifts, or other equipment
- Changing street lights
- Tree trimming

## Types of Electrical Lines

#### **Electrical Cables**

- High and low voltage
- Supervisory and signaling cables
- Cathodic protection (cabinets, cables, earthing conductors, cable shrouds)

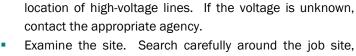
#### Communication Cables

- Phone lines
- Coaxial (data) and broadband cables
- Tram traction cables and trolley wires
- Railway supply

# Injury Prevention

When the work area may include power lines, take the following precautions to avoid accidental contact.

Stay away from power lines while working. Maintain at least
 10 feet from power lines, more near higher voltage lines.



Recognize high-voltage lines. Inform coworkers about the

- paying additional attention to find sight-obstructed lines.
- Assume all lines are energized and potentially dangerous.
- Make a safety clearance boundary with portable safety barriers, if possible.
- Use a spotter when using or moving equipment near power lines.
- When working with long or tall equipment, plan the work to keep all vehicles and objects clear of power lines. Adjust the position of the equipment to maintain a safe distance from all lines.

## **Common Misconceptions**

It is important for employees to receive accurate information when it comes to power line safety. Employers should address these and other misconceptions related to power lines.

- Birds land on power lines, so they must be safe to touch. FALSE: Electricity is always looking for the most direct route to the ground. Birds do not get electrocuted when they land on wires because they do not present a way to the ground.
- Power lines are insulated, so they are safe to touch.
  FALSE: Insulation is nonconductive material placed around the wire. Not all powerlines are insulated. Weather protection is sometimes placed on wires to protect them from rain and snow. Just because a wire is weather protected, does not mean it is insulated.
- Nonmetallic ladders are safe around power lines.
   FALSE: Wet ladders can be a conduit for electricity
- If power lines are not touched, they are safe.
   FALSE: Electricity can jump. Maintain a safe radius from the power line.



#### Power Line Hazards

Almost everyone working near power lines is at risk of encountering hazards. Common hazards include electrocution, electrical shock, fires/burns, and falls.

#### **Fallen Power Lines**

When encountering a fallen power line:

- Stay away
- Call for help
- Shuffle using small steps
- Warn others in the area

If a coworker contacts a power line, keep away and stay protected. It is possible to sustain a shock by touching someone who is in contact with electricity.

If operating machinery that strikes a power line and there is no immediate danger, move the equipment away. Warn others to stay away and to call 911. Stay on the equipment until it is known to be safe. If it is necessary to get off the equipment, jump clear, taking care not to touch the ground and the equipment simultaneously.



If an overhead wire falls across a vehicle, stay inside the vehicle and continue to drive away from the line. If the engine stalls, do not leave the vehicle. Warn people not to touch the vehicle or the wire. Call or ask someone to call the local electric utility company and emergency services.

### **Underground Wires**

Underground power and utility lines present constant danger. Before starting a job where digging is required:



- Look for evidence of underground utilities.
- Call Dig-Safe, the utility company, or equivalent.
- If contact occurs, follow the same procedures as for overhead wires.

## Tree Trimming

- Before tree trimming, identify the location of all power lines in the vicinity.
- Use proper equipment.
- Use only trained personnel.



## **Worker Training**

OSHA standards prescribe requirements for worker training on safety practices while working around overhead power lines. For example, 29 CFR 1910.333 specifies the minimum distances between workers using conductive equipment and power lines.

For additional information please consult the OSHA Standard: 29 CFR 1926, Subpart K - Electrical.





# Overhead Power Lines Safety Meeting Attendance Acknowledgement

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Meeting Location			
Name & Title of Individual Conducting Meeting			
Key Meeting Discussion Points / Important Reminders:			
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By signing this document, you confirm your attendance at the meeting and acknowledge the issues addressed above!			
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#### Disclaimer:

The information provided above was assembled using multiple resources. However, these materials do not contain ALL the information available regarding the required safety standards under local, provincial, state, or federal law for your industry.