



## GOALS

This safety session should teach employees to:

- Understand the training required for *qualified* workers.
- Understand the electrical work that only *qualified* workers are allowed to perform.
- Understand the basic electrical precautions and safety rules that even *unqualified* workers need to know.

### Applicable Regulations: 29 CFR 1910.331-335



#### 1. Qualified workers are permitted to work on or near exposed, energized electrical parts. Their training includes:

- How to distinguish exposed live parts from other parts of equipment
- Knowing the safety-related work practices for working on or near exposed live parts
- Skills to determine the voltage of exposed electrical parts
- Using insulating and shield materials as well as insulated tools

#### 2. Even *unqualified* workers with a job that might expose them to a risk of electric shock must be trained to know:

- The risks of energized equipment
- How to protect themselves and others when they work around electricity
- What tasks can be done only by *qualified* workers
- To always respect warning signs and barriers designed to protect them from live parts

#### 3. There are basic rules for working safely with electricity.

- Restrict work on live parts to *qualified* workers.
- De-energize all electrical circuits and equipment (if possible) before working on them. This means shutting off the current so that the current cannot flow into the part.
- Lock and tag out the electrical power source so that it cannot be reenergized accidentally.
- Wear the proper personal protective equipment (PPE), such as insulated gloves, nonconducting headgear, and eye protection.
- Use insulated tools.
- Make sure you don't accidentally make contact with live parts in blind areas.
- Make sure the same *qualified* worker who performed the lockout/tagout is responsible for removing locks and tags and reenergizing the equipment.

#### 4. Take care when using portable power equipment.

- Inspect equipment before each use, and remove from service any equipment with frayed wires or other signs of damage.
- Make sure all portable power equipment is grounded properly where plugs are attached to receptacles—that means a 3-pronged plug in a 3-pronged outlet.
- Never carry power equipment by its cord or unplug it by pulling the cord.



## 5. Take special precautions when working near overhead power lines.

- If possible, have the electrical company de-energize the lines before work begins.
- If this is not done, *unqualified* workers (and their tools) must stay at least 10 feet (ft) away from overhead lines with up to 50 kilovolts (kV) of power. For every extra 10 kV, the distance increases 4 inches.
- *Qualified* workers can get closer than 10 ft if necessary, but must use insulated tools and wear insulated gloves. The actual distances depend on the power level and insulation of tools and protective clothing—the greater the line’s voltage, the farther away you must stay.
- Vehicles must also be kept at least 10 ft from the power line except under certain conditions.
- Workers on the ground should not contact the vehicle or its equipment unless they are using protective equipment that is rated for the voltage of the line.

## 6. Following safety rules when working around electricity can quite literally mean the difference between life and death.

- Many people do not realize that normal household current is lethal.
- Similarly, many workers believe that overhead power lines are insulated and do not pose a hazard—they are dead wrong.
- In recent years, electrocution has been the cause of approximately 5 percent of all worker fatalities.
- It’s important to follow the rules and avoid making a mistake—you may not get a second chance.

---

### DISCUSSION POINTS:



- Ask employees to name some *operations* in your workplace that should be performed only by qualified workers.
- Indicate which equipment in your workplace requires following safe electrical practices.

### CONCLUSION:



- Only *qualified* workers should be performing jobs where there is exposure to live electrical parts.
- *All* workers should follow safe electrical practices, but *unqualified* workers should obey all warning signs and barricades and avoid exposure to live parts.

### TEST YOUR KNOWLEDGE:



Have your employees take the Electrical Workers Qualified and Unqualified quiz. By testing their knowledge, you can judge their understanding of the different roles each play in the workplace and the importance of following safe electrical practices at all times or whether they need to review the topic again soon.



**ELECTRICAL WORKERS QUALIFIED AND UNQUALIFIED QUIZ**

1. **Even normal household current is lethal.**  
a. True      b. False
2. **Unqualified workers can work around live parts if they use proper personal protective equipment (PPE) and insulated tools.**  
a. True      b. False
3. **Training for qualified workers does not include:**
  - a. How to identify exposed live parts and their voltage
  - b. That all electrical work should be done with the power on
  - c. Proper safety procedures for working on or near exposed live parts
4. **Unqualified workers must stay at least 10 feet (ft) away from overhead lines with over 50 kilovolts (kV) of power.**  
a. True      b. False
5. **It's safe to use electrical equipment with a frayed wire as long as it doesn't smoke, smell, or spark.**  
a. True      b. False
6. **Electrocution causes less than 1 percent of all workplace fatalities.**  
a. True      b. False
7. **Qualified workers lock and tag out the electrical power source so that it cannot be reenergized accidentally.**  
a. True      b. False
8. **Training for unqualified workers includes:**
  - a. The risks of energized equipment
  - b. What tasks can be done only by qualified workers
  - c. How to protect themselves and others when they work around electricity
  - d. All of the above
9. **Only the worker who locked and tagged out equipment should remove the locks and tags and reenergize the equipment.**  
a. True      b. False
10. **Only a 3-pronged outlet should be used with a 3-pronged plug.**  
a. True      b. False

**When you have completed this quiz, turn it in to your supervisor.**

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_



# Safety **Electrical Workers** Trainer **Qualified and Unqualified**

## ANSWERS TO ELECTRICAL WORKERS QUALIFIED AND UNQUALIFIED QUIZ

---

1. a. True.
2. b. False. Unqualified workers are never allowed to work around live parts.
3. b. Electrical work should be done with the power off if it is possible to do so.
4. b. False. Unqualified workers must stay at least 10 ft away from overhead lines with *under* 50 kV of power. If there is over 50 kV of power, they must stay even farther away.
5. b. False. It's never safe to use electrical equipment with a frayed wire.
6. c. False. Electrocutation causes about 5 percent of all workplace fatalities.
7. a. True.
8. d. All of the above.
9. a. True.
10. a. True.