



# High-Voltage (>600V) Over-Head Power Lines

January 2020

Employees are killed or disabled every year after accidentally coming in contact with high-voltage power lines. All of these accidents could have been avoided. *Red italics set in brackets indicate where you must customize the content of this tailgate meeting for your job site's equipment and conditions.*

As required by our Injury and Illness Prevention Program, we must keep our employees safe from the hazards associated with the workplace, such as high voltage overhead lines.

- We will not permit employees to work or use any equipment/tools in proximity to energized high-voltage lines without first effectively guarding against accidental contact with the lines.
- Overhead power lines will be considered energized unless they are visibly grounded and the owner/operator of the lines verifies that they are de-energized per section 2946(d). *[Discuss how de-energizing and grounding are ensured and, if both energized and de-energized lines may be present, how they will be clearly distinguished.]*

**The following will be implemented except where overhead electrical distribution and transmission lines have been de-energized and visibly grounded:**

## Location of High-Voltage Lines and Affected Equipment

- *[Discuss the locations and confirmed voltages of the lines.]*
- *[Discuss the types of equipment and materials (e.g., scaffolding, cranes, boom-lifts, stored materials) that will be in the vicinity of the power lines.]*

## Precautions to be Taken

- No activities will be performed unless precautions against accidental contact have been effectively taken. *[Ensure by conducting this tailgate/toolbox meeting and effectively implementing engineering controls, policies, and procedures required by sections 2946, 1611.5, and 1612.1- 1612.4.]*
- No tools, machinery, materials, etc., will be operated or handled over energized lines. *[Discuss allowable exceptions per section 2946(b)(1), if applicable.]*
- Minimal clearances will be maintained as follows:

- General required clearances for the operation, erection, handling, or transportation of tools, machinery, materials, structures, or scaffolds; the moving of any house or other building; or any other activity where any parts of the above or any part of an employee's body may approach overhead energized lines. *[See section 2946—Table 1 for minimum clearances based on voltage. Discuss how the required minimum distances will be communicated and enforced.]*
- Boom-type lifting/hoisting equipment, cranes, derricks, and tower crane clearances. *[See sections 1611.5, 1612.1-1612.4, and section 2946—Table 2 for minimum clearances based on voltage. Discuss how the required minimum distances will be communicated and enforced.]*
  - Warning requirements. *[Discuss how the warning requirements in sections 2947, 1611.5, and 1612.1–1612.2 will be met.]*
- Tools, equipment, supplies, materials, etc., will not be stored/manipulated/handled adjacent to overhead lines if doing so will bring them closer than section 2946—Table 2 minimal distances.
- Metal poles used in agriculture:
  - The supervisor must inspect for high-voltage lines that may expose employees to electrical hazards. *[Discuss the findings with employees. If high-voltage lines are present, comply with the following:]*
    - Electrically conductive poles must not be used for fruit-picking or nut-knocking.
    - Employees will not use or handle other conductive tools or equipment (e.g., irrigation pipe, pruning) where they could contact overhead high-voltage lines unless they have been properly trained. Such training must be conducted prior to employees performing such work, and address:
      - The risk of serious bodily injury or death.
      - The use of tools, equipment, and work practices necessary to perform work safely and maintain the required Table 1 and 2 clearances.
  - *[Discuss the policies and procedures that will be used to enforce the Table 1 and 2 minimum clearances.]*

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## Discussion Questions

- What are the required clearances that must be maintained from the overhead power lines for different voltages at this work site?
- How will the safe work zone be identified?
- What do you do if there is any question or doubt about what safety measures must be implemented?
- What else can be done at this work site to make your work safe?

### Disclaimer

The information provided is not meant to be either a substitute for or legal interpretation of the occupational safety and health regulations. Readers are cautioned to refer directly to Title 8 of the California Code of Regulations for detailed information regarding the regulation's scope, specifications, and exceptions and for other requirements that may be applicable to their operations.

This topic is limited to high-voltage overhead power lines. Refer to Title 8 of the California Code of Regulations, High-Voltage Electrical Safety Orders for details on all of the requirements that must be implemented when working around high voltage. Also reference General Industry Safety Orders section 3455 for agricultural operations where metal poles/pipe are used in vicinity of high-voltage lines, and Construction Safety Orders sections 1612.1–1612.4 for construction-related operations. For low-voltage hazards, reference the Low-Voltage Electrical Safety Orders.

The information covered in this tailgate topic does not fully address the required training of employees using conductive tools or equipment to perform duties such as pruning, harvesting, and handling of irrigation pipe in agricultural areas where such tools or equipment could come into contact with overhead high-voltage lines. Such training must be conducted prior to employees performing such work, and address:

- The risk of serious bodily injury or death.
- The use of tools, equipment, and work practices necessary to perform work safely and maintain the required Table 1 and 2 clearances.

Ensure all required training is documented and maintained per section 3203 *Injury and Illness Prevention Program* requirements.

### Resources

[Title 8, California Code of Regulations](http://www.dir.ca.gov/samples/search/query.htm) ([www.dir.ca.gov/samples/search/query.htm](http://www.dir.ca.gov/samples/search/query.htm))

- [Section 2946](#) Provisions for Preventing Accidents Due to Proximity to Overhead Lines
- [Section 2947](#) Warning Signs Required
- [Section 2948](#) Notifications to the Operators of High-Voltage Lines and Responsibility for Safeguards
- [Section 2949](#) Special Exemption
- [Section 3455](#) Overhead Electrical Lines (fruit and nut harvesting poles/equipment and irrigation piping)
- [Section 1611.5](#) Power Line Safety (Up to 350 kV) - Assembly and Disassembly
- [Section 1612.1](#) Power Line Safety: Equipment Operations up to 350 kV
- [Section 1612.2](#) Equipment Operations over 350 kV
- [Section 1612.3](#) Equipment Operations Closer than the Table A Zone
- [Section 1612.4](#) While Traveling Under or Near Power Lines with No Load

[Cal/OSHA Publications](http://www.dir.ca.gov/dosh/PubOrder.asp) ([www.dir.ca.gov/dosh/PubOrder.asp](http://www.dir.ca.gov/dosh/PubOrder.asp))

- [Cal/OSHA Guide to Electrical Safety](#)
- [Cal/OSHA Pocket Guide for the Construction Industry](#)

[Cal/OSHA Consultation Service](http://www.dir.ca.gov/dosh/consultation.html) ([www.dir.ca.gov/dosh/consultation.html](http://www.dir.ca.gov/dosh/consultation.html))

- 1-800-963-9424
- [InfoCons@dir.ca.gov](mailto:InfoCons@dir.ca.gov)

**Employees in Attendance  
(high-voltage overhead power line tailgate meeting)**

Date:

Person conducting the meeting:

Name (Print)

Signature

Name (Print)	Signature