

## Statutes and Regulations Pertaining to Overhead Powerline Infrastructure

October 29, 2018

### Public Resource Code (PRC)

#### PRC § 4292

Except as otherwise provided in [Section 4296](#) , any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or forest-covered land, brush-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for fire protection of such areas, maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole, a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such pole or tower. This section does not, however, apply to any line which is used exclusively as telephone, telegraph, telephone or telegraph messenger call, fire or alarm line, or other line which is classed as a communication circuit by the Public Utilities Commission. The director or the agency which has primary fire protection responsibility for the protection of such areas may permit exceptions from the requirements of this section which are based upon the specific circumstances involved.

#### PRC § 4293

Except as otherwise provided in Sections 4294 to 4296 , inclusive, any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or in forest-covered land, brush-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for the fire protection of such areas, maintain a clearance of the respective distances which are specified in this section in all directions between all vegetation and all conductors which are carrying electric current:

- (a) For any line which is operating at 2,400 or more volts, but less than 72,000 volts, four feet.
- (b) For any line which is operating at 72,000 or more volts, but less than 110,000 volts, six feet.
- (c) For any line which is operating at 110,000 or more volts, 10 feet.

In every case, such distance shall be sufficiently great to furnish the required clearance at any position of the wire, or conductor when the adjacent air temperature is 120 degrees Fahrenheit, or less. Dead trees, old decadent or rotten trees, trees weakened by decay or disease and trees or portions thereof that are leaning toward the line which may contact the line from the side or may fall on the line shall be felled, cut, or trimmed so as to remove such hazard. The director or the agency which has primary responsibility for the fire protection of such areas may permit exceptions from the requirements of this section which are based upon the specific circumstances involved.

#### PRC § 4294

A clearing to obtain line clearance is not required if self-supporting aerial cable is used. Forked trees, leaning trees, and any other growth which may fall across the line and break it shall, however, be removed.

**PRC § 4295**

A person is not required by Section 4292 or 4293 to maintain any clearing on any land if such person does not have the legal right to maintain such clearing, nor do such sections require any person to enter upon or to damage property which is owned by any other person without the consent of the owner of the property.

**PRC § 4296 (NOTE: This provision is effective after January 1, 2019 pursuant to AB 2911)**

Sections 4292 and 4293 do not apply if the transmission or distribution line voltage is 750 volts or less.

(a) Notwithstanding any other law, including Section 4295, any person who owns, controls, operates, or maintains any electrical transmission or distribution line may traverse land as necessary, regardless of land ownership or express permission to traverse land from the landowner, after providing notice and an opportunity to be heard to the landowner, to prune trees to maintain clearances pursuant to Section 4293, and to abate, by pruning or removal, any hazardous, dead, rotten, diseased, or structurally defective live trees. The clearances obtained when the pruning is performed shall be at the full discretion of the person that owns, controls, operates, or maintains any electrical transmission or distribution line, but shall be no less than what is required in Section 4293. This section shall apply to both high fire threat districts, as determined by the California Public Utilities Commission pursuant to its rulemaking authority, and to state responsibility areas.

(b) Nothing in subdivision (a) shall exempt any person who owns, controls, operates, or maintains any electrical transmission or distribution line from liability for damages for the removal of vegetation that is not covered by any easement granted to him or her for the electrical transmission or distribution line.

**Title 14 (Board of Forestry and Fire Protection Regulations)**

**14 CCR § 1250. Purpose.**

The purpose of Article 4 is to provide specific exemptions from: electric pole and tower firebreak clearance standards, electric conductor clearance standards and to specify when and where the standards apply.

Note: Authority cited: Sections 4292 and 4293, Public Resources Code. Reference: Sections 4292-4296, Public Resources Code.

**14 CCR § 1251. Definitions.**

The following definitions apply to this Article unless the context requires otherwise.

Defined word or phrase

“Conductor” means connector, a wire, or a combination of wires, and/or any other appliance designed and manufactured for use in the transmission and distribution of electrical current.

“Connector” means a device approved for energized electrical connections.

“Duff” means partially decayed leaves, needles, grass or other organic material accumulated on the ground.

“Firebreak” means a natural or artificial barrier usually created by the removal or modification of vegetation and other flammable materials for the purpose of preventing spread of fire.

“Hot line tap or clamp connector” means a connector designed to be used with a Grip-All Clamp stick (Shotgun) for connecting equipment jumper or tap conductors to an energized main line or running connector.

“Outer Circumference” means the exterior surface of a pole or tree at ground level or a series of straight lines tangent to the exterior of the legs of a tower at ground level. (See Figure 1, this Article.)

“Self-supporting aerial cable” means an assembly of abrasion resistant insulated conductors supported by a messenger cable which is normally grounded, designed and manufactured to carry electrical current for installation on overhead pole lines or other similar overhead structures.

“Tree wire” means an insulated conductor covered with a high abrasion resistant, usually non-metallic, outer covering, designed and manufactured to carry electrical current for installation on overhead pole lines or other similar overhead structures.

**14 CCR § 1252. Areas Where PRC 4292-4296 Apply in State Responsibility Areas.**

The Director will apply PRC 4292-4296 in any mountainous land, forest covered land, brush covered land or grass covered land within State Responsibility Areas unless specifically exempted by 14 CCR 1255 and 1257.

**14 CCR § 1252.1. Official Area Maps.**

The official maps of State Responsibility Areas defined in 14 CCR § 1220 are available for viewing and copying during normal business hours at the California Department of Forestry and Fire Protection, 1416 Ninth Street, Sacramento, California, 95814, in the Fire Protection Section.

When, pursuant to PRC 4125-4128, the Board revises State Responsibility Area boundaries, the Director will forward a legal description of a boundary change(s) to the respective electric utility(s) serving the area(s).

**14 CCR § 1252.2. Boundary Location -Roads, Etc.**

Where the boundaries of areas described in 14 CAC 1252 are along roads, highways, streets, railroads, streams, canals or rivers, the actual boundary shall be the center-line of the course of such roads, highways, streets, railroads, streams, canals, and rivers.

**14 CCR § 1252.3. Boundary Location -Section Lines, Etc.**

Where the boundaries of the area described in 14 CAC 1252 are on section, township or range lines, or on powerline rights-of-way, the poles, towers and conductors located thereon are within the area described.

**14 CCR § 1253. Time When PRC 4292-4296 Apply.**

The minimum firebreak and clearance provisions of PRC 4292-4296 are applicable during the declared California Department of Forestry and Fire Protection fire season for a respective county. The Director shall post the declaration on the official Department web site.

**14 CCR § 1254. Minimum Clearance Provisions - PRC 4292.**

The firebreak clearances required by PRC 4292 are applicable within an imaginary cylindrical space surrounding each pole or tower on which a switch, fuse, transformer or lightning arrester is attached and surrounding each dead end or corner pole unless such pole or tower is exempt from minimum clearance requirements by provisions of 14 CCR 1255 or PRC 4296. The radius of the cylinder is 3.1 m (10 feet) measured horizontally from the outer circumference of the specified pole or tower with height equal to the distance from the intersection of the imaginary vertical exterior surface of the cylinder with the ground to an intersection with a horizontal plane passing through the highest point at which a conductor is attached to such pole or tower. (See Figure 2 this Article.) Flammable vegetation and materials located wholly or partially within the firebreak space shall be treated as follows:

- (a) At ground level -remove flammable materials, including but not limited to, ground litter, duff and dead or desiccated vegetation that will allow fire to spread, and;
- (b) From 0-2.4 m (0-8 feet) above ground level -remove flammable trash, debris or other materials, grass, herbaceous and brush vegetation. All limbs and foliage of living trees shall be removed up to a height of 2.4 m (8 feet).
- (c) From 2.4 m (8 feet) to horizontal plane of highest point of conductor attachment -remove dead, diseased or dying limbs and foliage from living sound trees and any dead, diseased or dying trees in their entirety.

**14 CCR § 1255. Exemptions to Minimum Clearance Provisions -PRC 4292.**

The minimum clearance provisions of PRC 4292 are not required around poles and towers, including line junction, corner and dead end poles and towers:

- (a) Where all conductors are continuous over or through a pole or tower; or
- (b) Where all conductors are not continuous over or through a pole or tower, provided, all conductors and subordinate equipment are of the types listed below and are properly installed and used for the purpose for which they were designed and manufactured;
  - (1) compression connectors,
  - (2) automatic connectors,
  - (3) parallel groove connectors,
  - (4) hot line tap or clamp connectors that were designed to absorb any expansion or contraction by applying spring tension on the main line or running conductor and tap connector,
  - (5) Fargo GA 300 series piercing connectors designed and manufactured for use with tree wire,
  - (6) flat plate connectors installed with not less than two bolts,
  - (7) tapered C-shaped member and wedge connectors,
  - (8) solid blade single phase bypass switches and solid blade single phase disconnect switches associated with circuit reclosers, sectionalizers and line regulators,
  - (9) equipment that is completely sealed and liquid-filled;
  - (10) current limiting non-expulsion fuses or
- (c) On the following areas if fire will not propagate thereon;
  - (1) fields planted to row crops,
  - (2) plowed or cultivated fields,
  - (3) producing vineyards that are plowed or cultivated;
  - (4) fields in nonflammable summer fallow;
  - (5) irrigated pasture land;
  - (6) orchards of fruit, nut or citrus trees that are plowed or cultivated,
  - (7) Christmas tree farms that are plowed or cultivated; and
  - (8) swamp, marsh or bog land; or
- (d) Where vegetation is maintained less than 30.48 cm (12 inches) in height, is fire resistant, and is planted and maintained for the specific purpose of preventing soil erosion and fire ignition.

**14 CCR § 1256. Minimum Clearance Provisions -PRC 4293.**

Minimum clearance required by PRC 4293 shall be maintained with the specified distances measured at a right angle to the conductor axis at any location outward throughout an arc of 360 degrees. (See Figure 3 this Article.)

Minimum clearance shall include:

- (1) any position through which the conductor may move, considering, among other things, the size and material of the conductor and its span length;

(2) any position through which the vegetation may sway, considering, among other things, the climatic conditions, including such things as foreseeable wind velocities and temperature, and location, height and species of the vegetation.

14 CCR § 1257

**§ 1257. Exempt Minimum Clearance Provisions - PRC 4293.**

(a) The minimum clearance provisions of PRC 4293 applicable in State Responsibility Areas are exempted:

(1) Where conductors are:

(A) insulated tree wire, maintained with the high density, abrasion resistant outer covering intact, or

(B) insulated self-supporting aerial cable, maintained with the insulation intact, or

(C) supported by sound and living tree trunks from which all dead or decadent branches have been removed.

(2) On areas described in 14 CCR 1255(c).

(3) For mature trees ("Exempt Trees") whose trunks and major limbs are located more than six inches, but less than the distance required for clearance by PRC 4293, from primary distribution equipment (conductor and energy carrying hardware, generally less than 35 kilovolts).

(A) Exempt Trees must meet all of the following criteria, as confirmed by a Certified Arborist or a Registered Professional Forester:

1. The tree or limb must be six (6) inches or more from the line at all times.

2. The size of the tree or limb at the conductor level must be at least six (6) inches in diameter.

3. The tree must not have "scaffold branches," below eight and one-half feet from the ground (so the tree can not be easily climbed).

(B) All Utility Companies with primary distribution conductors in State Responsibility Areas (SRA) of California shall:

1. Inspect Exempt Trees annually to verify they continue to meet the criteria in 14 CCR 1257(a)(3).

2. Maintain a database of information about Exempt Trees that includes 1) location, using the format of latitude/longitude in decimal degrees (DDD.DDDD Datum WGS84); 2) species; and 3) last date of inspection. If any Utility does not currently maintain such a database it must establish one and provide its initial report to CAL FIRE by July 1, 2013. Utilities may request, and the Director may approve, an extension of time in which to achieve compliance with this reporting requirement.

3. Report the information required pursuant to 14 CCR 1257(a)(B)(2) above, in an electronically searchable format, annually to CAL FIRE by July 1 of each year for the previous calendar year.

4. When constructing, installing, replacing, or maintaining primary distribution equipment, prevent the creation of new Exempt Trees, to the extent feasible.

(C) Where there are site specific indications that a conductor has or will come into contact with an Exempt Tree, or portion thereof as described above, the condition will be corrected either by altering the tree or by applying an engineering solution. The actions taken will be documented in that utility's Exempt Tree database.

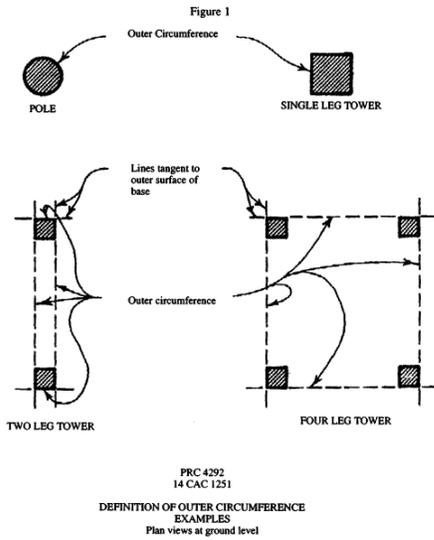
(b) These exemptions do not apply to "Hazard Trees" as identified and explained on pages 1-20 through 1-24 in the Department's "Powerline Fire Prevention Field Guide" dated November 2008 and posted on the Department's website at: <http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fppguidepdf126.pdf>.

**14 CCR § 1258. Tree Lines.**

When electric conductors and subordinate elements are fastened to living, sound trees, commonly referred to as tree lines, the requirements of PRC 4292 and 4293 shall apply the same as to a pole or tower line.

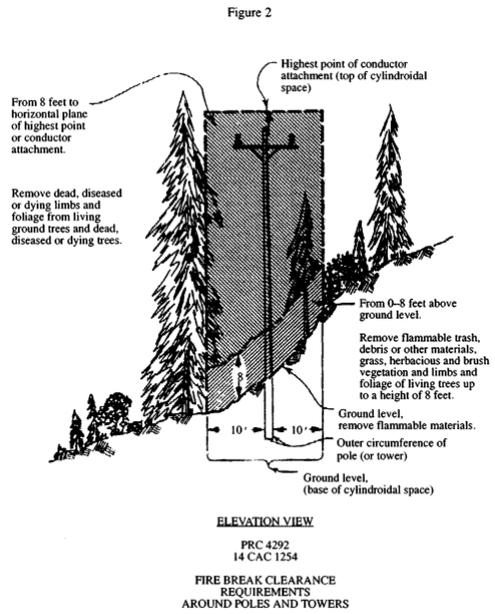
**(NOTE: See following pages for Tables associated with § 1258)**

Image 1 within § 1258. Tree Lines.



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Image 2 within § 1258. Tree Lines.



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Image 3 within § 1258. Tree Lines.

