

1 **Board of Forestry and Fire Protection**
2 **Title 14 of the California Code of Regulations (14 CCR),**
3 **Division 1.5, Chapter 7, Subchapter 4, Article 4**
4 **Utility Clearance Exemptions, 2019**

5
6 § 1250. Purpose.

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

10 Note: Authority cited: Sections 4292 and 4293, Public Resources Code.

11 Reference: Sections 4292-4296, Public Resources Code.

12
13 § 1251. Definitions.

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

16 ~~Defined word or phrase~~

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

20 "Connector" means a device approved for energized electrical connections.

21 "Duff" means partially decayed leaves, needles, grass or other organic
22 material accumulated on the ground.

23 "Fire Resistive" means coatings that meet or exceed testing standards
24 equivalent to UL 94 V-0.

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

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

7 "Load break tool" means a tool used to safely open or close a circuit by
8 controlling the arc that is created, and is designed to interrupt the current
9 involved.

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

13 "Qualified Electrical Worker (QEW)" means a worker who has received training
14 in and has demonstrated skills and knowledge in the construction and
15 operation of electric equipment and installations and the hazards involved.

16 "Self-supporting aerial cable" means an assembly of abrasion resistant
17 insulated conductors supported by a messenger cable which is normally
18 grounded, designed and manufactured to carry electrical current for
19 installation on overhead polelines or other similar overhead structures.

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

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

1 § 1252. Areas Where PRC 4292-4296 Apply in State Responsibility Areas.

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

5 Note: Authority cited: Sections 4292, 4293, Public Resources Code. Reference:
6 Sections 4125-4128, 4292, 4293, Public Resources Code.

7
8 § 1252.1. Official Area Maps.

9 The official maps of State Responsibility Areas defined in 14 CCR § 1220 are
10 available for viewing and copying during normal business hours at the
11 California Department of Forestry and Fire Protection, 1416 Ninth Street,
12 Sacramento, California, 95814, in the Fire Protection Section. The official
13 maps are also available on the CAL FIRE Fire Resource and Assessment Program
14 webpage.

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

18 Note: Authority cited: Sections 4292, 4293, Public Resources Code. Reference:
19 Sections 4125-4128, 4292, 4293, Public Resources Code.

20
21 § 1252.2. Boundary Location -Roads, Etc.

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

1 Note: Authority cited: Sections 4292, 4293, Public Resources Code. Reference:
2 Sections 4125-4128, 4292, 4293, Public Resources Code.

3
4 § 1252.3. Boundary Location -Section Lines, Etc.

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

8 Note: Authority cited: Sections 4292 and 4293, Public Resources Code.

9 Reference: Sections 4125-4128, 4292 and 4293, Public Resources Code.

10
11 § 1253. Time When PRC 4292-4296 Apply.

12 The minimum firebreak and clearance provisions of PRC 4292-4296 are
13 applicable ~~during~~ when the ~~declared~~ California Department of Forestry and
14 Fire Protection requires burn permits ~~fire season~~ for a respective county.

15 The Director shall post the declaration on the official Department web site.

16 Note: Authority cited: Sections 4292 and 4293, Public Resources Code.

17 Reference: Sections 4125-4128, 4292 and 4293, Public Resources Code.

18
19 § 1254. Minimum Clearance Provisions - PRC 4292.

20 The firebreak clearances required by PRC 4292 are applicable within an
21 imaginary cylindroidal space surrounding each pole or tower on which a
22 switch, fuse, transformer or lightning arrester is attached and surrounding
23 each dead end or corner pole unless such pole or tower is exempt from minimum
24 clearance requirements by provisions of 14 CCR 1255 or PRC 4296. The radius
25 of the cylindroid is 3.1 m (10 feet) measured horizontally from the outer
circumference of the specified pole or tower with height equal to the

1 distance from the intersection of the imaginary vertical exterior surface of
2 the cylindroid with the ground to an intersection with a horizontal plane
3 passing through the highest point at which a conductor is attached to such
4 pole or tower. (See Figure 2 this Article.) Flammable vegetation and
5 materials located wholly or partially within the firebreak space shall be
6 treated as follows:

7 (a) At ground level -remove flammable materials, including but not limited
8 to, ground litter, duff and dead or desiccated vegetation that will allow
9 fire to spread, and;

10 (b) From 0-2.4 m (0-8 feet) above ground level -remove flammable trash,
11 debris or other materials, grass, herbacious and brush vegetation. All limbs
12 and foliage of living trees shall be removed up to a height of 2.4 m (8
13 feet).

14 (c) From 2.4 m (8 feet) to horizontal plane of highest point of conductor
15 attachment -remove dead, diseased or dying limbs and foliage from living
16 sound trees and any dead, diseased or dying trees in their entirety.

17 Note: Authority cited: Section 4292, Public Resources Code. Reference:
18 Section 4292, Public Resources Code.

19
20 § 1255. Exemptions to Minimum Clearance Provisions -PRC 4292.

21 The minimum clearance provisions of PRC 4292 are not required around poles
22 and towers, including line junction, corner and dead end poles and towers+
23

24 (a) Where all conductors are continuous over or through a pole or tower; or

25 (b) Where fire will not propagate in the following areas:±

(1) fields planted to row crops;±

(2) plowed or cultivated fields;±

1 (3) producing vineyards that are plowed or cultivated;

2 (4) fields in nonflammable summer fallow;

3 (5) irrigated pasture land;

4 (6) orchards of fruit, nut or citrus trees that are plowed or

5 cultivated,;

6 (7) Christmas tree farms that are plowed or cultivated; and

7 (8) swamp, marsh or bog land; or

8 (c) Where vegetation compatible with surrounding utility infrastructure is

9 planted or maintained for the specific purpose(s) of

10 (1) protecting sensitive habitat;

11 (2) preventing soil erosion; or

12 (3) aesthetics or residential landscape improvement;

13 the vegetation shall be of types that reduce the risk of fire ignition and

14 rapid fire spread, and shall be maintained or modified at an appropriate

15 height to eliminate ladder fuels.

16 (d) Where all conductors are not continuous over or through a pole or tower,

17 provided, all conductors and subordinate equipment are of the types listed

18 below and are properly installed and used for the purpose for which they were

19 designed and manufactured:;

20 (1) compression connectors installed with correct die,

21 (2) automatic dead-ends, connectors,

22 (3) parallel groove connectors with engineered shear bolts,

23 (4) hot line tap or clamp connectors that were designed to absorb any

24 expansion or contraction by applying spring tension on the main line or

25 running conductor and tap connector,

- 1 (5) ~~Fargo CA 300 series~~ Insulation piercing connectors designed and
2 manufactured for use with tree or coated wire with engineered shear bolts,
- 3 (6) flat plate connectors installed with not less than two engineered shear
4 bolts,
- 5 (7) tapered C-shaped member and wedge connectors with engineered shear bolts
6 when bolts are required,
- 7 (8) solid blade single phase bypass switches and solid blade single phase
8 disconnect switches associated with circuit reclosers, sectionalizers, and
9 line regulators or, when operated by a Qualified Electrical Worker using a
10 Load Break Tool,
- 11 (9) equipment that is completely sealed and
12 (i) liquid-filled, or
13 (ii) devices that use Vacuum Interrupter (VI) technology, or
14 (iii) air insulation technology with Department-approved spark
15 prevention units.
- 16 (10) current limiting non-expulsion fuses, ~~or~~
- 17 (11) Engineered mechanical and electrical shunt with engineered shear bolts,
- 18 (12) Mechanical connector or splice with engineered shear bolts,
- 19 (13) Pole line hardware that does not carry current, or
- 20 (14) Lightning/surge protection devices with Department-approved spark
21 prevention units
- 22 ~~(c) On the following areas if fire will not propagate thereon:;~~
- 23 ~~(1) fields planted to row crops,;~~
- 24 ~~(2) plowed or cultivated fields,;~~
- 25 ~~(3) producing vineyards that are plowed or cultivated;~~
- ~~(4) fields in nonflammable summer fallow;~~

1 ~~(5) irrigated pasture land;~~

2 ~~(6) orchards of fruit, nut or citrus trees that are plowed or cultivated,;~~

3 ~~(7) Christmas tree farms that are plowed or cultivated; and~~

4 ~~(8) swamp, marsh or bog land; or~~

5 ~~(d) Where vegetation is maintained less than 30.48 cm (12 inches) in height,~~
6 ~~is fire resistant, and is planted and maintained for the specific purpose of~~
7 ~~preventing soil erosion and fire ignition.~~

8 Note: Authority cited: Section 4292, Public Resources Code. Reference:

9 Section 4292, Public Resources Code.

10
11 § 1256. Minimum Clearance Provisions -PRC 4293.

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

15 Minimum clearance shall include:

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

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

22 Note: Authority cited: Section 4293, Public Resources Code. Reference:

23 Sections 4293 and 4296, Public Resources Code.

24
25 § 1257. Exempt Minimum Clearance Provisions - PRC 4293.

1 (a) The minimum clearance provisions of PRC 4293 applicable in State
2 Responsibility Areas but outside of CPUC High Fire Treat Districts Tier 2 and
3 3 are exempted:

4 (1) Where conductors are:

5 (A) ~~insulated~~ covered tree wire, maintained with the high density, abrasion
6 resistant, fire resistive outer covering intact, or

7 (B) insulated self-supporting aerial cable systems, maintained with the
8 insulation and the high density, abrasion resistant, fire resistive outer
9 covering intact, or

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

12 (2) Where automatic line splices with approved shunt devices are installed as
13 described in (11).

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

15 (3) For mature trees ("Exempt Trees") whose trunks and major limbs are
16 located more than six inches, but less than the distance required for

17 clearance by PRC 4293, from primary distribution equipment (conductor and
18 energy carrying hardware, generally less than 35 kilovolts).

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

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

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

25 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).

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

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

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

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

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

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

23 (b) These exemptions do not apply to "Hazard Trees" as identified and
24 explained on pages 1-20 through 1-24 in the Department's "Powerline Fire
25 Prevention Field Guide" dated November 2008 (or latest version) and posted on

1 the Department's website at:

2 <http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fppguidepdf126.pdf>.

3 Note: Authority cited: Sections 4111 and 4293, Public Resources Code.

4 Reference: Sections 4293 and 4296, Public Resources Code.

5

6 ~~§ 1258. Tree Lines.~~

7 ~~When electric conductors and subordinate elements are fastened to living,~~

8 ~~sound trees, commonly referred to as tree lines, the requirements of PRC 4292~~

9 ~~and 4293 shall apply the same as to a pole or tower line.~~

10 ~~Image 1 within § 1258. Tree Lines.~~

11 ~~Image 2 within § 1258. Tree Lines.~~

12 ~~Image 3 within § 1258. Tree Lines.~~

13 Note: Authority cited: Sections 4292 and 4293, Public Resources Code.

14 Reference: Sections 4292, 4293, and 4296, Public Resources Code.

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