

Decision No. 71009**ORIGINAL**

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of
SOUTHERN CALIFORNIA EDISON COMPANY
for an order amending General Order
No. 95, "Rules for Overhead Electric
Line Construction," with respect to
Rules 22, 44, 48, 49 and 54.

AMENDED
APPLICATION NO. 48236
(Filed May 13, 1966)

O P I N I O N

Southern California Edison Company (Edison) requests an order amending and revising certain portions of Rules 22, 44, 48, 49 and 54 of General Order No. 95, "Rules for Overhead Electric Line Construction," relating to specifications and requirements for distribution and transmission poles and related facilities.

Certain of these specifications and requirements relating to service and meter poles have been the subject of deviations and exceptions applied for by and granted to a number of California utilities.^{1/}

In the interest of making the practices of California utilities uniform with respect to such specifications and requirements, conferences have been held between California utilities, both publicly and privately owned, the Commission staff, and the State Division of Industrial Safety. Amendments and modifications to certain rules of General Order No. 95 were proposed relative to such matters which would help to achieve statewide uniformity in the application of said rules and the practice of each utility with respect to such specifications and requirements.

^{1/} California Electric Power Company	E-1029 dated 6/2/59
Southern California Edison Company	E-1069 dated 6/28/60
Pacific Gas and Electric Company	E-1006 dated 12/9/58

In general, the proposed modifications clarify and complement the existing provisions of General Order No. 95 and impose more stringent requirements for service and meter poles than presently established by the Commission resolutions listed in footnote 1/.

The present provisions of General Order No. 95 specify strength requirements and safety factors for structural steel poles, towers, and structures, but do not contain specifications for other metal poles. Edison proposes the application of structural steel safety factors set forth in Table 4 of the general order to all metallic poles, towers, crossarms and members of foundations; to establish a sub-section for aluminum poles in Rule 48, "Ultimate Strength of Materials"; and to modify Rule 49.1A to expand provisions presently applicable to steel poles to include all metallic poles.

There are presently available metallic service and meter poles which were not contemplated to be used at the inception of General Order No. 95, the use of which would not have an adverse effect on public safety and their use should be permitted. The Commission is cognizant of the fact that most service and meter poles are utilized for providing temporary service during construction of various types of buildings and are, therefore, frequently relocated and constantly exposed to damage by construction equipment. Such usage is reflected in the safety factor set forth in the ensuing order.

The Commission has investigated the proposed modifications and finds that: such modifications will not be detrimental to the safety of the general public and workmen; such modifications will assist in achieving greater statewide uniformity of practices relative to specifications and requirements for service and meter poles; and concludes that General Order No. 95 should be modified to the extent set forth in Appendix A attached hereto. A public hearing is not necessary.

O R D E R

IT IS ORDERED that:

1. The Commission's General Order No. 95, "Rules for Overhead Electric Line Construction," is hereby modified to the extent set forth in Appendix A attached hereto.

2. Resolution Nos. E-1006, dated 12-9-58, E-1029, dated 6-2-59, and E-1069, dated 6-28-60, shall be terminated as of December 31, 1966.

IT IS FURTHER ORDERED that the Secretary shall cause a copy of this order and its Appendix A to be served upon each electric and telephone utility subject to the jurisdiction of this Commission, the State Division of Industrial Safety, and further, to cause a suitable number of copies to be made available for distribution to such other agencies furnishing utility service and the general public as may request the same.

The effective date of this order shall be the date hereof.

Dated at San Francisco, California, this 26TH day of JULY, 1966.

[Signature]
President

George T. Grover

Frederic B. Holshoff

[Signature]

[Signature]
Commissioners

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The rules of General Order No. 95 are modified, amended or added to as set forth below:

1. Rule 22.0-E

This is a new rule, which shall read as follows:

"E. SERVICE AND METER POLE means a pole, or a pole type structure that supports only service drops, associated overhead conductors, vertical runs, ground wires, meters and equipment used for electrical service. A service drop mast or other support securely attached to a building is not considered to be a service and meter pole."

2. Rule 22.8

This rule is modified to read as follows:

"SERVICE DROPS mean the conductors strung between a pole line and a building, a structure or a service and meter pole."

3. Rule 44.1, Table 4

In Table 4, after line 12 "Wood Poles", add new line:

	:	Grade "A"	:	Grade "B"	:	Grade "C"	:	Grade "F"	:
"Metallic Service	:		:		:		:		:
and Meter Poles"	:	-	:	"2"	:	"2"	:	-	:

In Table 4, under Element of Line, modify lines 13, 14 and 15 to read:

"Structural or tubular steel poles (other than service and meter poles), towers, crossarms and steel members of foundations."

4. Rule 48.6 "Metallic Service and Meter Poles"

This is a new rule which shall read as follows:

"Metallic service and meter poles shall be designed and constructed so that the poles and parts thereof will not fail or be seriously distorted at any load less than the maximum working loads (see Rule 43 for loadings) multiplied by the safety factors specified in Table 4, Rule 44. The safety factors specified in Table 4, Rule 44 shall be applied as follows:

"Tension: The yield strength of the metal used shall be divided by the safety factor specified in Table 4, Rule 44 to determine the maximum allowable working stress.

"Compression: The critical buckling strength of the material used, as determined by applicable formulas employing the effective slenderness ratio and yield strength, shall be divided by the safety factors specified in Table 4, Rule 44, to determine the maximum allowable working stress.

"Shear: The yield strength of the material used shall be divided by the safety factors given in Table 4, Rule 44 to determine the maximum allowable working stress."

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5. Rule 49.1-A

The first sentence of the second paragraph of this rule is amended to read as follows:

"Metallic and reinforced concrete poles and structures together with their foundations, shall be of such material and dimensions as to withstand, with safety factors not less than those specified in Rule 44, the maximum stresses to which they are subjected under the loading conditions specified in Rule 43. The stress values used in calculation of safety factors shall be as specified in Rules 48.2, 48.3 and 48.6."

6. Rule 49.1-C

The heading of this rule is amended to read as follows:

"C. SETTING OF POLES"

7. Rule 49.1-C

This rule is modified by adding immediately before Table 6 a new paragraph which shall read as follows:

"Metallic poles that are set directly in firm soil or rock shall be set at least as deep as specified in Table 6 for wood poles. Where the resultant bearing surface is not sufficient to prevent overturning or excessive movement of the pole at the ground line under maximum loading conditions, special measures such as heel and toe bracing, setting in concrete, or bolting to a concrete foundation shall be employed."

8. Rule 49.1-C

The heading of Table 6 is amended to read as follows:

"Pole Setting Depths for Wood Poles"

9. Rule 54.6B

This rule is modified by adding thereto a new paragraph which shall read as follows:

"Ground wires installed on the surface of service and meter poles (see Rule 22.0-E for definition) which terminate in effectively grounded meter or equipment enclosures not more than eight feet above ground are not required to be covered by a suitable protective covering (see Rule 22.2 for definition), provided they are encased in rigid steel conduit or No. 8 AWG minimum armored copper ground wire is used."

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10. Rule 54.6-F

The second paragraph of this rule is revised to read as follows:

"At the upper end of vertical runs or risers on wood poles, any terminal or terminal fitting within distances from center line of pole less than as specified in Table 1, Case 8, shall be protected by a crossarm or wood block placed above it at a distance not exceeding 4 inches. The wood block may be omitted if the terminal or terminal fitting at the upper end of a vertical run or riser of 750 volts or less is on the same side of a pole as, and not more than 1 foot below, a transformer or where the conductors of a vertical run or riser are enclosed in plastic pipe (see Rule 22.2C) and do not terminate in a grounded terminal or terminal fitting."