

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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RETURN TO ELECTRIC SECTION

RESOLUTION NO. E-818

Orig. & Copy
to Secretary

PUBLIC UTILITIES DEPARTMENT
DIVISION: Electric
DATE: September 1, 1953
File No. G.O. 95/158

R E S O L U T I O N

Director
Numerical File
Alphabetical File
Accounting Officer

SUBJECT: Permission to Deviate from Rule 54.9C(1) of General Order No. 95, with Respect to Multiconductor Cable with Bare Neutral Mounted 2½ Inches from Surface of Pole.

WHEREAS: CALIFORNIA-PACIFIC UTILITIES COMPANY having requested permission to use multipleconductor cable with bare neutral for low voltage distribution in rack construction, and

WHEREAS: In the absence of such permission such neutral conductor would be in violation of Rule 54.9C(1) of General Order No. 95 which requires that conductors in rack construction in urban districts shall have a covering not less than the equivalent of double braid weather-resistant covering, and

WHEREAS: It appears that safety to workmen and the public will not be lessened by use of such multipleconductor cable and that the requested permission should be granted, and good cause appearing

IT IS ORDERED that under the provisions set forth in Appendix A attached hereto permission be and hereby is granted to California-Pacific Utilities Company for the use of multiple conductor cable with bare neutral.

IT IS HEREBY FURTHER ORDERED that Appendix A hereinbefore authorized be marked to show that it was authorized under Resolution No. E-818 of the Public Utility Commission of the State of California.

The Secretary is directed to cause appropriate notice to be given said utility of the granting of this permission.

I hereby certify that the foregoing Resolution was duly introduced, passed and adopted at a regular session of the Public Utilities Commission of the State of California, held on the 1st day of September, 1953 the following Commissioners voting favorably thereon:

R. E. MITTELSTAEDT, JUSTUS F. CRAEMER,
KENNETH POTTER,
PETER E. MITCHELL.


Secretary

APPENDIX A

LOW VOLTAGE MULTICONDUCTOR CABLE WITH BARE NEUTRAL, 0-300 VOLTS

Multiconductor cable with bare neutral for circuits of not more than 300 volts attached to poles at clearances less than those specified in Table 1, Column D, Cases 8 and 9, and where so attached, the following rules shall apply. The term "messenger", when used in the following rules, in addition to the definition set forth in Rule 21.9 of General Order No. 95 also includes the bare neutral conductor when used as the principal supporting member of the cable.

I Material and Strength

- (1) Messenger: The conditions specified in Rule No. 57.3 of General Order No. 95 shall apply.
- (2) Insulation: The phase conductors shall be insulated with a material that during the life of the installation is able to withstand 900 volts, 60 cycles, for 1 minute.
- (3) Jumpers: No uninsulated jumpers shall be used for service taps.

II Clearances and Climbing Space

A. POLE ARRANGEMENT AND CLEARANCES

- (1) General: The clearances specified, in General Order No. 95 in the opening conditions of Rule 57.4, and in Rules 57.4A, 57.4B, 57.4D and 57.4E shall apply.
- (2) Between Conductors in Cables: The conditions specified in Rule 57.4C shall apply and in addition, no specified clearance is required between the insulated phase conductors and the bare neutral of such 0-300-volt multi-conductor cables.
- (3) Clearance from Poles: 0-300-volt multiconductor cable with bare neutral shall be supported on an insulator and shall have a clearance of not less than 2½ inches from the surface of the pole.
- (4) Vertical Clearance: When attached less than 15 inches from surface of pole, such messenger and cable shall be not less than 6 feet vertically above or below unprotected conductors of any other circuit, except such messenger or cable may be less than 6 feet but not less than 4 feet above unprotected conductors on crossarms, guarded conductors in rack construction, or guarded cables attached to surface of pole.
- (5) Conductor Arrangement: In tangent construction, cable shall not be attached to more than one side of a pole (there being 4 sides) and conductors attached to the cable at the cable level shall not be attached to more than one side of the pole other than the side occupied by the cable. Climbing space in conjunction with these attachments shall be maintained as specified in Rule II-B.
- (6) At Cable Terminals: The clearances required in Rule II-A-(4) between a cable and unprotected conductors shall not be held to apply between a cable (and its grounded messenger) and unprotected conductors of the same circuit on poles where unprotected conductors enter (or leave) a cable. On such poles no grounded messenger shall be less than 36 inches from the surface of the pole where the unprotected conductors are supported in rack construction or 72 inches from the surface of the pole where the unprotected conductors are supported on crossarms.

- (7) Conductor Spacing: The vertical separation between individual phase conductors when supported on individual clevises or a multiconductor rack shall be not less than 6 inches.
- (8) Dead-end Construction: On poles with the messenger dead ended in more than one direction, the grounded messenger or insulated phase conductors of the cable shall not be within 15 inches of the surface of a pole. Sectionalized, ungrounded portions of the messenger may contact adjacent sides of a pole but service drops shall not be supported within 15 inches of the surface of the pole. The climbing space shall be as in Rule II-B-(2).

B. CLIMBING SPACE IN MULTICONDUCTOR CABLE CONSTRUCTION

A climbing space shall be maintained through the level of conductors supported in cable construction and for a vertical distance of not less than 4 feet above and below the cable. The position of the climbing space through the levels of conductors in cable construction shall be related to climbing spaces through conductor levels above and below the cable in accordance with requirements of Rule 54.7-A of General Order No. 95.

- (1) Climbing Space with Cable $2\frac{1}{2}$ Inches or More from the Surface of Pole: The clearances specified in Rule 54.9-F of General Order No. 95 for climbing space in rack construction shall apply to cables supported $2\frac{1}{2}$ inches or more from surface of the pole.
- (2) Climbing Space in Corner Dead-End Construction: On corner dead-end poles the climbing space shall be in the quadrant opposite the quadrant between the two dead-ended cables and shall be a 30-inch square with one corner at the center line of the pole.
- (3) Guys, vertical conductors attached to the surfaces of poles, and terminals which are listed in Rule 54.7-A4 of General Order No. 95 as allowable climbing space obstructions, are not permitted in climbing spaces specified in Rule II-B.

III Service Drops

Phase conductors of service drops taken from multiconductor cables shall have insulation equivalent to that specified in Rule I-(2). Where service drops are supported on ACSR or aluminum messenger, the messenger shall be protected against abrasion. Services supported on the messenger shall not be attached less than 15 inches from the center line of the pole.

IV Fastenings

The provisions of Rule 57.5 of General Order No. 95 shall apply.

V Extended Messenger

No extended messengers in 0-300-volt multiconductor cable construction shall be installed.

VI Sags

The provisions of Rule 57.9 of General Order No. 95 shall apply.