

Decision No. 36791

BEFORE THE RAILROAD COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application  
of PACIFIC GAS AND ELECTRIC COMPANY  
for an order of the Railroad Commission  
of the State of California amending and  
modifying those provisions of General  
Order No. 95 herein mentioned.

Application No. 25309

ORIGINAL

BY THE COMMISSION:

FIRST SUPPLEMENTAL OPINION

In Decision No. 36344 in the above proceedings the Pacific Gas and Electric Company (sometimes referred to herein as Pacific) was given authority to deviate from certain rules of General Order No. 95, in response to its original application. In this first Supplemental Application permission is requested for authority to deviate from certain provisions of Rules 54.4-D6b, 54.7-A1 and 58.3-B5 of the General Order.

Rule 54.4-D6b, page 102 of General Order 95, requires as a general provision that "where conductors are dead-ended on a pole in vertical configuration, the energized portions of such conductors shall have clearances of..... 18 inches from the surface of pole for voltages in excess of 7500 volts."

Rule 54.7-A1 requires, where crossarms are not involved, that "climbing space through the levels of conductors dead-ended on poles in vertical configuration shall be a square of the horizontal dimensions tabulated below; and one side of such climbing space shall be bounded by the vertical plane of the dead-ended conductors with the center line of pole bisecting such side.....

"Voltage of Conductors

Dimensions of Square

.....

.....

7500-46,000 volts

36 inches

More than 46,000 volts

36 inches plus 1/2 inch per kv  
in excess of 46 kv."

According to Pacific the application of the foregoing rules to a circuit in the top circuit position on a pole where no branch circuit is connected thereto, is unnecessary from the standpoint of climbing space and requires the installation of unduly long assemblies of dead-ended insulators and hardware which introduce hazard to linemen in the performance of their maintenance work; and that the climbing space specified in Rule 54.7-A1 does not permit the use of the type of construction shown in Figure 1, Exhibit E of the Supplemental Application, for the reason that in the construction of this type of conductor supports such climbing space can not be provided. It is alleged that such type of construction is frequently used where conductors of circuits in excess of 7500 volts are supported at poles where line angles are 60 degree or less. Therefore, in place of the climbing space specified in Rule 54.7-A1, Applicant, with respect to conductors attached in vertical configuration to poles without the use of crossarms, proposes to afford and maintain the climbing spaces described in Exhibit E; and proposes to apply, as shown by dimension A in Figures 1 and 2 of Exhibit E, the minimum clearances of Rule 54.4-D2 between energized conductors and center line of pole in place of the minimum clearance of 18 inches specified in Rule 54.4-D6b between energized conductors and surface of pole. This proposal appears to warrant the deviation requested provided the deviation is limited in its application to circuits in the top position on poles, provided there is no branch circuit construction at this conductor level, and further provided that the vertical clearance from the lowest conductor of such top circuit is not less than 6 feet to the nearest line conductor of the next circuit below. The order will provide for such deviation from these rules.

Rule 58.3-B5, page 150 of General Order No. 95 requires, among other things, that "transformer cases, hangers, and other metal parts in contact therewith shall clear through bolts, arm braces and other hardware by not less than 2 1/2 inches." In place of maintaining such clearance Pacific requests (1) in situations involving the hanging of single transformers by direct attachment to poles that it be permitted to hang transformers on through bolts which extend into the climbing space and (2), in situations involving the hanging and supporting of two or more

transformers in a bank on crossarms, that it be permitted to maintain clearances of less than  $1\frac{1}{2}$  inches between transformer hangers and through bolts which extend into the climbing space. In making this request the applicant proposes, in both of the cases outlined above, that through bolts on which transformers are directly hung or from which they have a clearance of less than  $1\frac{1}{2}$  inches will be covered on the opposite side of pole from transformers with a protective Douglas Fir (Oregon Pine) block of design and having dimensions not less than those shown in Drawing No. 021611 attached to this First Supplemental Application as Exhibit A, and installed as shown in Exhibits A, B, and D.

It is appreciated that to comply with the above quoted rule of our General Order would require re-design of the hanger apparatus adopted by the committee of electric utilities and manufacturers, and that to effect such revision of design during the period of material restrictions and manpower shortages appears inadvisable, particularly because of the use of material and time required for retooling factories at this time. Under these circumstances the use of the proposed covering appears to be warranted provided well seasoned wood is used, installation of such coverings are made in a workmanlike manner and the coverings have at least the full dimensions of the drawings in Exhibit B. The order will authorize, under these conditions, the deviation requested.

#### ORDER

The Commission having considered the above application and being of the opinion that a public hearing is unnecessary and good cause appearing,

IT IS ORDERED that Pacific Gas and Electric Company be and it is hereby authorized to deviate from the provisions of General Order No. 95 in the following particulars and under the conditions hereinafter specified, it being found that such deviation and exemptions are justified:

1. Rules 54.4-D6b and 54.7-A1 - Pages 102 and 113 respectively

The clearance of not less than 18 inches between surface of pole and conductors in excess of 7500 volts, specified in Rule 54.4-D6b, and the climbing

space specified in Rule 54.7-A1, need not apply to supply circuits in excess of 7500 volts supported in vertical configuration in the top circuit position on poles where conductors of such circuits are not supported on crossarms and where no branch circuit exists at this level, provided the energized portion of such circuits have clearances from center line of pole which are not less than those specified in Rule 54.4-D2, and provided climbing spaces of not less than the minimum dimensions of those in Exhibits E and G of First Supplemental Application are maintained, and further provided that a minimum vertical clearance of 6 feet shall be maintained between the lowest conductor of the top circuit and the nearest conductor of the next circuit below.

2. Rule 58.3-B5 - Page 115

The minimum clearance of  $1\frac{1}{2}$  inches from transformer cases, hanger and other transformer metal parts to through bolts, arm braces, and other hardware, specified in Rule 58.3-B5, need not apply to through bolts in metallic contact with transformer cases or metal parts thereof nor to through bolts supporting heel arms, provided the portion of such through bolts extending into the climbing space is covered with a wood protective covering having dimensions not less than those specified in Exhibit B of First Supplemental Application 25309, and further provided such coverings are made of well seasoned Douglas Fir (Oregon Pine) and are installed in a workmanlike manner.

The order shall be effective on the twentieth day after the date hereof.

Dated at San Francisco, California, this 28<sup>th</sup> day of December

1943.

Francis D. Havenue

Justus S. Cushman  
Richard L. Rankin  
Frank W. Brown

Commissioners