

Decision No. 81871, Application No. 54185 (Filed July 19, 1973)

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 respects to installation of Polyvinyl Chloride in heavy loading districts.

### OPINION

Southern California Edison Company (Edison) seeks an order amending General Order No. 95 so as to allow the use of Polyvinyl Chloride (PVC) conduit as a protective covering in heavy loading districts. PVC conduit is presently permitted as a protective covering under Rule 22.2C but its use is restricted to light loading districts.

On April 3, 1971, by Resolution No. E-12B3, the Commission authorized Edison to deviate from Rule 22.2C of General Order No. 95 for a two-year test period to install PVC conduit as protective covering in heavy loading districts. On March 27, 1973, by Resolution No. E-1357, the Commission extended the test period until October 13, 1973, in order to allow Edison time to file an application to amend General Order No. 95.

Edison states that the results of its two-year test period are completely favorable. PVC conduit has been installed in heavy loading districts in the Edison service territories. Edison states that employees working in close proximity to high voltages prefer the non-conductive PVC conduit to other types of protective covering. According to Edison field personnel, there has been no evidence whatsoever that low temperatures or high altitudes will have an adverse effect on this conduit.

The use of PVC conduit has been recognized in the National Electric Code and used nationwide since 1968, with no restrictions for low temperatures.

In a letter to Edison dated June 7, 1973, marked Exhibit 1 and made a part of the record in this proceeding, Sierra Pacific Power Company states that it has used PVC conduit for cable risers above 8 feet in Nevada exclusively for five years. Linemen who have had an opportunity to compare PVC conduit risers to wooden molding are said to be quite emphatic in their preference for the PVC conduit. Sierra Pacific Power Company states that it has encountered no problems with the use of PVC conduit risers in any of its applications, but has had many problems with the wood molding previously used. One serious problem with wood molding is woodpecker damage. It is expected that PVC conduit would be an effective deterrent to this type of damage.

In its letter to Edison dated May 10, 1973, included in the record as Exhibit 2, Pacific Power & Light Company states that it has used Schedule 40 PVC conduit since 1964 in sizes half inch through six inch throughout its service area except in those locations in California where use was prohibited by General Order No. 95. Pacific Power & Light Company comments that PVC conduit suffered no damage from extremes of temperature or corrosion and that the non-conductive qualities of PVC afford greater safety to its workmen and the general public.

Edison states that its proposed amendment was reviewed by Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Sierra Pacific Power Company, each of which has advised Edison that it concurs in the proposed amendment. In addition, the proposed amendment was reviewed by the Department of Water & Power of the City of Los Angeles, Sacramento Municipal Utility District, the Commission staff and representatives of the International Brotherhood of Electrical Workers.

The Commission finds that the proposed amendment will not be detrimental to the safety of the general public; will establish uniform requirements, the application of which will ensure adequate service and secure safety to persons engaged in the construction, maintenance, operation, or use of PVC conduit in heavy loading districts and concludes that General Order No. 95 should be amended to the extent set forth in Appendix A.

A public hearing is not necessary.

#### ORDER

IT IS ORDERED that the Commission's General Order No. 95, "Rules for Overhead Electric Line Construction," is hereby amended to the extent set forth in Appendix A attached hereto.

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 is the date hereof.

Dated at San Francisco, California, this 12<sup>th</sup> day of September, 1973.

## APPENDIX A

Rule 22.2C of General Order No. 95 is revised to read as set forth below:

- C PLASTIC PIPE made of rigid unplasticized polyvinyl chloride having the properties and dimensions specified as Type II, High Impact, Normal Chemical Resistance in United States Department of Commerce Commercial Standard No. CS 207-60. The plastic pipe herein specified shall be installed only outside the climbing space on poles, or structures.

**Original Version**  
Rule 22.2-C

22.2 PROTECTIVE COVERING

- C. PLASTIC PIPE made of rigid unplasticized polyvinyl chloride having the properties and dimensions specified as Type II, High Impact, Normal Chemical Resistance in United States Department of Commerce Commercial Standard No. CS 207-60. The plastic pipe herein specified shall be installed only outside the climbing space on poles or structures within the light loading district as defined in Rule 21.0-C and Rule 43.

**Strikeout and Underline Version**  
Rule 22.2-C

22.2 PROTECTIVE COVERING

- C. PLASTIC PIPE made of rigid unplasticized polyvinyl chloride having the properties and dimensions specified as Type II, High Impact, Normal Chemical Resistance in United States Department of Commerce Commercial Standard No. CS 207-60. The plastic pipe herein specified shall be installed only outside the climbing space on poles or structures ~~within the light loading district as defined in Rule 21.0-C and Rule 43.~~

**Final Version**  
Rule 22.2-C

22.2 PROTECTIVE COVERING

- C. PLASTIC PIPE made of rigid unplasticized polyvinyl chloride having the properties and dimensions specified as Type II, High Impact, Normal Chemical Resistance in United States Department of Commerce Commercial Standard No. CS 207-60. The plastic pipe herein specified shall be installed only outside the climbing space on poles or structures.