

Southern California Edison
2023-WMPs – 2023-WMPs

DATA REQUEST SET Cal Advocates - SCE - 2023 WMP - 21

To: Cal Advocates
Prepared by: Tram Camba
Job Title: Wildfire Safety – Sr. Advisor
Received Date: 11/13/2023

Response Date: 11/30/2023

Question 005:

Cal Advocates understands that, in every project to replace overhead bare distribution with covered conductor, SCE performs, or has performed, pole loading calculations for every pole in the project.

- a) Is the above characterization correct? Please elaborate if it is incorrect.
- b) Does SCE have a threshold safety factor (or other result from a pole loading calculation) at which it will replace poles in a project?
- c) If the answer to part (b) is yes, please describe SCE's threshold(s).
- d) If the answer to part (b) is no, please explain how SCE determines which poles to replace in a project.

Response to Question 005:

- a) Is the above characterization correct? Please elaborate if it is incorrect.*

Response to a): Yes, SCE performs pole loading analysis on all impacted poles when replacing bare conductor with covered conductor.

- b) Does SCE have a threshold safety factor (or other result from a pole loading calculation) at which it will replace poles in a project?*

Response to b): Yes

- c) If the answer to part (b) is yes, please describe SCE's threshold(s).*

Response to c): The California Public Utilities Commission's General Order (G.O.) 95 specifies safety factors for each "Grade" of overhead line construction (refer to the specification on safety factors for new and in-service construction in SCE's Pole Loading Manual below). SCE's distribution facilities will be designed to meet or exceed either Grade A or Grade B requirements.¹ The site-specific wind zone must be referenced to help ensure the relevant wind

¹ GO95 Rule 42 Table 3 states that if there is a joint owned pole with 3rd party communication, it should be Grade A construction. At SCE, jointly owned poles or poles with 3rd party attachments are designed as Grade A. GO95 Rule 42 also states that Class H circuits, which are SCE's distribution and sub-transmission circuits per GO95 Rule 20.6.D(2), are Grade B. Therefore, if we have SCE facilities, including Transmission Telecom Communication, on a pole it is considered and designed as Grade B.

pressure is considered during the design stage.



2.0 Safety Factors for Wood, Composite, and Light Weight Steel Poles

Table 8: Safety Factors for Wood, Light Weight Steel (LWS), and Composite Fiber Glass Poles

| Pole Type | Design Criteria (lb) | New Construction | | | In-Service Construction | | |
|----------------------|----------------------|--|--|----------|--|--|----------|
| | | Grade A Construction (Joint-Use Poles) Pole Load Safety Factor | Grade B Construction Pole Load Safety Factor | Buckling | Grade A Construction (Joint-Use Poles) Pole Load Safety Factor | Grade B Construction Pole Load Safety Factor | Buckling |
| Wood | 6 | 4.00 | 3.00 | 4.00 | 2.67 | 2.00 | 2.67 |
| | 8 | 4.00 | 3.00 | 4.00 | 2.67 | 2.00 | 2.67 |
| | 12 | 3.00 | 3.00 | 4.00 | 2.00 | 2.00 | 2.67 |
| | 18 | 3.00 | 3.00 | 4.00 | 2.00 | 2.00 | 2.67 |
| | 24 | 3.00 | 3.00 | 4.00 | 2.00 | 2.00 | 2.67 |
| LWS | 6 | 2.50 | 1.88 | 2.50 | 1.50 | 1.50 | 1.50 |
| | 8 | 2.50 | 1.88 | 2.50 | 1.50 | 1.50 | 1.50 |
| | 12 | 1.88 | 1.88 | 1.88 | 1.50 | 1.50 | 1.50 |
| | 18 | 1.88 | 1.88 | 1.88 | 1.50 | 1.50 | 1.50 |
| | 24 | 1.88 | 1.88 | 1.88 | 1.50 | 1.50 | 1.50 |
| Composite Fiberglass | 6 | 4.00 | 3.00 | 4.00 | 2.67 | 2.00 | 2.67 |
| | 8 | 4.00 | 3.00 | 4.00 | 2.67 | 2.00 | 2.67 |
| | 12 | 3.00 | 3.00 | 4.00 | 2.00 | 2.00 | 2.67 |
| | 18 | 3.00 | 3.00 | 4.00 | 2.00 | 2.00 | 2.67 |
| | 24 | 3.00 | 3.00 | 4.00 | 2.00 | 2.00 | 2.67 |
| Guying Requirements | - | 2.00 | 2.00 | - | 1.33 | 1.33 | - |

 = For Reference Only

EFFECTIVE DATE
10-27-2023

Pole Loading Standards

PLM-2

APPROVED
BSC

Pole Loading Manual

PAGE
2 - 31

d) If the answer to part (b) is no, please explain how SCE determines which poles to replace in a project.

Response to d): N/A