

Southern California Edison
2025-WMPs – 2025-WMPs

DATA REQUEST SET Cal Advocates - SCE - 2025 WMP - 08

To: Cal Advocates
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Received Date: 4/16/2024

Response Date: 4/19/2024

Question 01:

Your Base WMP at p. 117 states:

SCE's overall PSPS risk is the product of...PSPS Likelihood (IRC4) and PSPS Consequence (IRC5). SCE calculates PSPS Risk at the circuit level. Overall PSPS risk is the sum of the circuit level risk in HFRA.

- a) Please explain how PSPS risk is calculated at a circuit level. For example, does SCE calculate a PSPS risk score for each isolatable segment of a circuit before selecting the weakest isolatable segment's PSPS risk score to represent the entire circuit, is the PSPS risk score based on the PSPS Likelihood and PSPS Consequence of the entire circuit as an average, or is a different method used?
- b) Please provide mathematical formulae that represent the calculations described in your response to part (a).
- c) Please explain whether you also calculate PSPS risk scores at the isolatable segment level.
- d) Please explain how evaluation of PSPS risk scores at the isolatable segment level affects PSPS risk scores at the circuit level.

Response to Question 01:

As a general comment, SCE notes that its calculation of PSPS risk is consistent with how it explains the calculation of risk components in the 2023-2025 WMP. Please see Section 6.2.2, which reviews overall PSPS risk and the constituent elements of the calculation.

a) Please explain how PSPS risk is calculated at a circuit level. For example, does SCE calculate a PSPS risk score for each isolatable segment of a circuit before selecting the weakest isolatable segment's PSPS risk score to represent the entire circuit, is the PSPS risk score based on the PSPS Likelihood and PSPS Consequence of the entire circuit as an average, or is a different method used?

PSPS Risk is probability of de-energization (POD) times the consequences of PSPS. POD is calculated using 10 years of historical weather data (2012-2021), current de-energization criteria, and existing mitigations (if the segment is covered conductor).

PSPS consequence incorporates safety, reliability and financial values that use the number of customers impacted, estimated outage time, estimated outage length, internal financial estimates for damage and safety values for the calculations. Page 136 of SCE's 2023-2025 WMP explains how

natural unit consequences are calculated, which are then converted into MARS units.

b) Please provide mathematical formulae that represent the calculations described in your response to part (a).

$$PSPS\ Risk = POD \times MARS_{PSPS}$$

POD = probability of De-energization

$MARS_{PSPS}$ = MARS (Multi Attribute Risk Score) consequence for PSPS

c) Please explain whether you also calculate PSPS risk scores at the isolable segment level.

Once the POD is calculated at circuit level, it is then propagated to segment level, based on the length of the segments in the circuit. Isolable circuit segment PSPS risk can then be aggregated from that level.

d) Please explain how evaluation of PSPS risk scores at the isolable segment level affects PSPS risk scores at the circuit level.

POD is calculated at circuit level and then propagated downward to conductor segment level using the length of the conductor over total conductor in circuit as the weighted value.