

**PACIFIC GAS AND ELECTRIC COMPANY
10 Year Electrical Undergrounding Plan (EUP)
Data Response**

PG&E Data Request No.:	MGRA_001-Q005
PG&E File Name:	EUP-PhI_DR_MGRA_001-Q005
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Requester DR No.:	MGRA-DR-PGE-EUP-26-01
Requesting Party:	Mussey Grade Road Alliance
Requester:	Joseph Mitchell
Date Sent:	October 14, 2026
PG&E Witness(es):	Justin Sadler, Andrea Brown

SUBJECT: PSPS AND EPSS

QUESTION 005

PG&E states that it “*assumes that undergrounding eliminates PSPS and EPSS events on the underground portions of a Circuit Segment, resulting in 100 percent effectiveness for those risk categories.*” (p. 67).

- a. Explain how PG&E’s model and assumption take upstream above ground circuit segments that may be subject to PSPS into account.
- b. What fraction of circuit segments in the proposed portfolio have above-ground circuit segments upstream that have been subject to PSPS and EPSS at the beginning of the project?
- c. Does PG&E’s EUP project sequencing prioritize circuit segments that have downstream circuit segments that have been undergrounded? If so, where and how was this incorporated into PG&E’s planning process?

ANSWER 005

- a. PG&E’s PSPS risk methodology accounts for risks associated with upstream overhead lines and equipment through its PSPS risk calculation. Under this methodology, customer-experienced PSPS risk is allocated to upstream circuit segments located within the historical PSPS event polygon based on the relative mileage exposure of those circuit segments within the polygon. As a result, PSPS risk experienced by downstream customers is apportioned among the upstream circuit segments that contribute to the PSPS exposure. Please refer to EUP-PhI_DR_MGRA_001-Q005Atch01.pdf for an illustration of how PSPS risk is allocated among upstream circuit segments within a PSPS event polygon.

To calculate PSPS risk reduction benefits, mitigation effectiveness is applied after PSPS risk has been allocated. For undergrounding projects, PG&E assumes that undergrounded facilities are 100% effective against PSPS, while overhead facilities are assumed to be 0% effective against PSPS. For hybrid projects, the reduction in

circuit-observed PSPS risk is proportional to the percentage of the circuit segment that is undergrounded.

Because the PSPS risk calculation already allocates risk among upstream circuit segments based on mileage exposure within the PSPS event polygon, the PSPS risk attributed to a given downstream circuit segment has already been reduced through the allocation process to account for upstream impacts. For example, if an entire circuit segment is undergrounded, the project receives the benefit associated only with the portion of circuit-observed PSPS risk allocated to that circuit segment; the remaining risk is allocated to upstream circuit segments. Applying an effectiveness value of less than 100 percent to the risk allocated to the undergrounded facilities would therefore account for the upstream impacts a second time. Accordingly, PG&E applies 100 percent effectiveness to the undergrounded portion of a circuit segment after the PSPS risk has been calculated and allocated.

In other words, residual PSPS risk associated with upstream overhead facilities is represented through the risk allocation methodology itself, rather than through a reduction in the effectiveness assigned to undergrounded facilities.

- b. PG&E interprets “proposed portfolio” as the estimated EUP Plan (i.e., the underlying projects that constitute the Plan Mitigation Objective). Of the 360 circuit segments included in the estimated EUP Plan, 332 have experienced an upstream Enhanced Powerline Safety Settings (EPSS) activation, and 206 have experienced an upstream Public Safety Power Shutoff (PSPS) activation in the seven-year lookback period used for the PSPS Outage Program Risk Model, which combines PSPS Lookback Study (2018–2022) with SCADA-captured PSPS events from 2023–2024.
- c. No. PG&E does not incorporate the existence of previously undergrounded downstream circuit segments as an explicit input, weighting factor, or ranking criterion in EUP project sequencing.