

**PACIFIC GAS AND ELECTRIC COMPANY  
Wildfire Mitigation Plans Discovery 2023  
Data Response**

PG&E Data Request No.:	CalAdvocates_014-Q003		
PG&E File Name:	WMP-Discovery2023_DR_CalAdvocates_014-Q003		
Request Date:	April 11, 2023	Requester DR No.:	CalAdvocates-PGE-2023WMP-14
Date Sent:	April 17, 2023	Requesting Party:	Public Advocates Office
DRU Index #:		Requester:	Holly Wehrman

The following questions relate to your 2023-2025 WMP submission.

**QUESTION 003**

P. 359 of PG&E's WMP discusses Breakaway Connectors, and states, "The breakaway disconnect uses a weak link to provide a predictable point of separation and the service will then fall to the ground de-energized."

- a) What is the maximum wind speed that Breakaway Connectors can handle without separating?
- b) Has PG&E studied whether conditions exist that could cause a temporary fault and minimal or no damage to a non-breakaway connection, but would cause a Breakaway Connector to separate? For example, a small branch falling on the line.
- c) If the answer to part (b) is yes, please provide any results of such studies.
- d) If the answer to part (b) is no, does PG&E plan to perform such a study?
- e) What reliability impacts does PG&E forecast from Breakaway Connector installation?
- f) Please quantify the ignition risk associated with a Breakaway Connector separating. If this risk has not been quantified, describe the ignition risk in qualitative terms.
- g) Do Breakaway Connectors increase the likelihood of an EPSS-induced outage? Please explain your answer.
- h) If the answer to part (g) is yes, please quantify the increased likelihood of an EPSS-induced outage on circuits where Breakaway Connectors are installed.

**ANSWER 003**

- a) Maximum wind speed is not easily defined. Span length, tension, conductor size and wind direction all influence the maximum wind speed.

General Order 95 rule 49.4 Table 8 and 49.4-C3 require Supply service drops to have a minimum strength of #8 soft or annealed copper. This is 479.8 pounds.

The service breakaway has two available weak links 500 lbs. for services 75' and shorter. 750 pounds for services longer than 75 feet and up to 150 feet.

The pilot location for the service breakaway has experienced three storms with winds exceeding 100 mph with no breakage of the weak links (both links are 750 lbs. due to span length).

- b) Yes, we have studied these issues.
- c) Two limb strikes were observed with limbs weighing 125 lbs. and 200 lbs., respectively. No damage was found, and the weak links did not activate.
- d) Not applicable, please see the response to subpart (b) above.
- e) We do not expect any reliability impacts.
- f) No ignition risk is expected by the service breakaway activating. Our tests showed no spark from the breakaway activating at the rated amperage of the conductor. The conductor will fail before the breakaway.
- g) EPSS is not affected by secondary conductors. It is primary voltage only.
- h) Not applicable, please see the response to subpart (g) above.