

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire Mitigation Plans Discovery 2022
Data Response

PG&E Data Request No.:	CalAdvocates_013-Q10		
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Date Sent:	March 9, 2022	Requesting Party:	Public Advocates Office
PG&E Witness:		Requester:	Miles Gordon

The following questions relate to your 2022 WMP Update submission.

Note: if the report requested in question 1(a) contains a full response to any of the other questions or sub-parts, your responses thereto may consist of a citation to specific pages of the report.

QUESTION 10

Regarding these two 2022 WMP Initiatives:

- 7.3.3.17.4 – Updates to grid topology to minimize risk of ignition in HFTDs, Rapid Earth Current Fault Limiter¹
- 7.3.6.8 – Protective Equipment and Device Settings”²

Please explain:

- a) How do these two initiatives differ?
- b) How do these two initiatives compare in terms of expected risk reduction?
- c) How do these two initiatives compare in terms of impacts to customers from loss of power?
- d) Have you performed a comparative cost-benefit analysis of these two initiatives?
- e) If the answer to part (d) is yes, please provide this analysis.
- f) Are aware of any external (non-PG&E) comparative cost-benefit analysis of these two initiatives?
- g) If the answer to part (f) is yes, please provide this analysis or a link to it.

ANSWER 10

- a) The Rapid Earth Fault Current Limiter (REFCL), discussed in Section 7.3.3.17.4 of the 2022 WMP, is a change in grid topology, and a system grounding method to reduce the fault energy to prevent wildfire ignition for line-to-ground fault conditions and provide enhanced ability to detect these conditions versus traditional overcurrent protection. This technology is being piloted at one substation

¹ PG&E's 2022 WMP, pp. 555-557.

² PG&E's 2022 WMP, pp. 730-739.

(Calistoga) currently. Protective Equipment and Device Settings, referred to as Enhanced Powerline Safety Settings (EPSS) and discussed in Section 7.3.6.8 of the 2022 WMP, is a change to the traditional overcurrent protection settings to faster detect and isolate line-to-line and line-to-ground fault conditions. For EPSS, there is no change to grid topology or system grounding as it makes use of traditional protective equipment.

- b) As stated in Section 7.3.6.8, based upon 2021 activation experience, EPSS has shown a reduction of 80% in CPUC-reportable ignitions on EPSS-enabled circuits between July 28, 2021 and October 20, 2021. Based upon 2021 performance, it is expected that similar reduction in CPUC reportable ignitions will be present going forward. REFCL installation and testing is still in progress and has not yet been released to operation. Additionally, REFCL is only able to mitigate line-to-ground fault conditions.
- c) REFCL will result in a circuit breaker outage for any line-to-ground fault within the circuit. This will likely result in wider outages vs. EPSS where minimum coordination levels between protective devices are maintained.
- d) No cost benefit analysis has been performed with REFCL vs. EPSS.
- e) N/A
- f) No, we are not aware of any external effort to perform a cost benefit analysis of REFCL vs. EPSS.
- g) N/A