

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

**WSD Action Statement**

Date: January 28, 2021
Subject: Pacific Gas and Electric Company's December 11, 2020 Change Order Report

Summary

This Action Statement by the Wildfire Safety Division (WSD) approves the Pacific Gas and Electric Company (PG&E) Change Order Report submitted on December 11, 2020 to postpone deployment of the SmartMeter™ Partial Voltage Detection initiative from February 2021 to June 2021. The scope and plan of the Partial Voltage Detection initiative remains unchanged; the change in timing is due to a technical capability issue.

Background and Standard of Review

Resolution WSD-002 established a process for electrical corporations to submit a Change Order Report in order to modify, reduce, increase, or end any initiatives in its Wildfire Mitigation Plan (WMP) prior to the 2021 WMP update. The WSD reviews an electrical corporation's Change Order Report to determine whether the electrical corporation has sufficiently provided the following information:

- a) Identification of the proposed change
- b) Justification of the proposed change
- c) The change in expected outcomes resulting from the proposed change

Regarding criterion "c," the WSD evaluates whether the electrical corporation sufficiently explained how the proposed change will impact the outcomes of its wildfire mitigation programs and if the electrical corporation has undertaken or committed to necessary steps to minimize adverse outcomes.

To support its review of PG&E's December 11, 2020 Change Order Report, the WSD engaged in follow-up conversations with PG&E staff.

WSD Evaluation of Change Order Request**a) Identification of the Proposed Change**

In its 2020 WMP, PG&E estimated an allocation of \$930,000 for SmartMeter™ Partial Voltage Detection¹ (Partial Voltage Detection) as one of its initiatives to test technology designed to reduce ignition probability and the consequences of wildfires. Previously known as Enhanced

¹ PG&E's 2020 Updated WMP, Section 5.3.2.2.3 at page 5-91 and Attachment 1, Table 22

Wire Down Detection, Partial Voltage Detection is an enhanced situational awareness firmware that can detect and locate downed distribution lines more quickly to facilitate a speedier response.

PG&E explains that SmartMeter™ Partial Voltage Detection is already available on 4.5 million single phase Smart Meters with a planned extension to Three-Phased meters and Four-Wire distribution systems. In its WMP, PG&E stated that it plans to deploy an additional 356,000 Three-Phase Smart Meters extending up to 25,597-line miles of Tier 2 and Tier 3 High Fire-Threat District (HFTD) areas with Four-Wire Distribution before its February 2021 WMP annual update. Under partial voltage conditions of 25-75%, the new firmware deployed on the meter will send real time alarms to the Distribution Management System. This translates to easily detecting and locating down distribution lines, which alerts first responders to promptly extinguish related incidents of wire-down ignitions. The technology reduces risk by reducing potential detection time by approximately 24 minutes for certain wire down events, with a historical average of 3% of those events causing ignitions.² PG&E has not yet calculated the overall risk reduction benefits since not enough post-implementation data has been collected to compare to pre-implementation data.³

During deployment of the Partial Voltage Detection in November 2020 on 1,000 in-service meters, PG&E discovered a technical issue impacting the reliability of billing reads on Smart Meters where the firmware was deployed; 30% of the meters exhibited a propensity for faulty reads for periods of time. In the event that meter misreads during a billing period, customers will be billed based on estimated bill values based on historical usage, and not on actual usage.⁴ PG&E is unable to enact a partial deployment, as the “software issue occurs on a random set of meters and the impacted meter population changes over a period of time.”⁵ PG&E states that the technical issue did not arise during its testing phase, and PG&E needs to resolve this issue before continuing deployment, which impacts the timing of the initiative.

The WSD finds that PG&E has sufficiently identified the proposed change in its December 11, 2020 Change Order Report pursuant to Resolution WSD-002.

b) Justification of Change

PG&E explained that it is technically infeasible to implement the Partial Voltage Detection capability on Three-Phase Smart Meters because of the unreliability issues with bill reads. This prompted PG&E to defer the deployment of firmware in order to resolve the technical issues needed to enable the Partial Voltage Detection capability on Three-Phase Smart Meters without jeopardizing reliability of information and customer billing reads. This justification

² PG&E Follow-Up Question #1 Response, provided to WSD on January 15, 2021.

³ PG&E Follow-Up Question #1 Response, provided to WSD on January 15, 2021.

⁴ PG&E Follow-Up Question #2 Response, provided to WSD on January 15, 2021.

⁵ PG&E Follow-Up Question #3 Response, provided to WSD on January 15, 2021.

aligns with Reliability and Affordability objectives of WSD's Utility Wildfire Mitigation Strategy and Roadmap, to focus on whether utility wildfire mitigation spend is being done in an intelligent and efficient way.

The WSD finds that PG&E has provided sufficient justification for the proposed change in its December 11, 2011 Change Order Report.

c) Change in Expected Outcomes Resulting from the Proposed Change & Budget Impact⁶

PG&E expects that deployment of the Partial Voltage Firmware will be completed by June 2021 to all 365,000 Three-Phase Smart Meters in Tier 2 and Tier 3 HFTD areas. Although the delay with the SmartMeter™ Partial Voltage Detection firmware will impact the ability to detect and locate downed distribution lines more quickly, PG&E anticipates minimal impact on the overall wildfire risk mitigation measures since the capability should be in place in late spring, before the onset of the 2021 Wildfire Season.⁷

PG&E reported spending \$1.15 million as of November 2020 for the Partial Voltage Detection firmware deployments to Three-Phase meters and Four-Wire distribution systems. A capital budget forecast increase is projected in recognition of the project costs and there has been no redeployment of funds from this initiative.

The WSD finds that PG&E has sufficiently accounted for impacts resulting from delaying the deployment of the SmartMeter™ Partial Voltage Detection initiative.

Conclusion

Based on the information provided by PG&E in its Change Order Report, and subsequent discussions with PG&E staff, PG&E's December 11, 2020 Change Order Report is approved. The WSD finds this Change Order Report complies with Guidance Resolution WSD-002 and the process to modify mitigation measures and risk reduction efforts. The WSD expects that before the end of June 2021, PG&E will have SmartMeter™ Partial Voltage Detection firmware in place.

Sincerely,



Caroline Thomas Jacobs
Director, Wildfire Safety Division
California Public Utilities Commission

⁶Approval of a WMP or Change Order Report does not equate to approval of costs. See Resolution WSD-002, Ordering Paragraph 2, and Resolution WSD-003, Ordering Paragraph 6.

⁷ PG&E refers to June 1, 2021 as start of Wildfire season in its 2020 WMP.