

## 2025 WMP Commitment GM-07 (EPSS Reliability Study) & ACI PG&E-25U-06 – Evaluation and Reporting of Safety Impacts Relating to EPSS: Narrative

This document serves as a narrative companion to the 2024 EPSS Reliability Study as well as ACI PG&E-25U-06, primarily to provide information that is not appropriate for the spreadsheet format additional data are provided in.

- Please note, enablement data included in the spreadsheet attachment accompanied for GM-07 and ACI PG&E-25U-06 are for the circuit on which a CPZ is associated. EPSS enablement criteria are based on Meteorology outputs for circuits in High Fire Risk Areas and EPSS Buffer Areas.
- Any associated conclusions or changes to threshold enablement as a result of analysis on the above:
  - In addition to reviewing the results of the GM-07 and ACI PG&E-25U-06 combined analysis, PG&E continuously monitors and evaluates reliability impacts for our customers when EPSS is enabled, as well as overall outage impacts for customers within the EPSS scope throughout the year in relation to its effectiveness. In 2024, the EPSS PMO observed that 89% of CPUC-reportable fire incidents in HFTD or HFRA on EPSS-enabled circuits were less than 10 acres in size. Additionally, the EPSS PMO noted in 2024 that 629 outages, or approximately 22% of EPSS outages, were categorized as EPSS “saves” – outages occurring on EPSS-enabled zones caused by vegetation, animals, equipment failure, third parties, or environmental factors under R3 or greater conditions that potentially prevented an ignition. Historically, under R3 or greater conditions, 100% of fatalities, 100% of structures destroyed, over 95% of acres burned from any ignition cause, and 26% of historical PG&E HFTD ignitions occurred. Given these conditions, which were observed starting at the R3 FPI rating level, the EPSS program adopts a prudent approach to enablement by activating EPSS settings at forecasted R1 and R2 FPI rating levels depending on various fire risk conditions observed throughout the year.
  - Upon conducting a stratified risk and reliability comparison analysis, PG&E concluded that enabling EPSS settings in R3 or greater FPI conditions is supported during both peak and non-peak wildfire risk seasons, and under certain R2 and R1 FPI conditions throughout the year based on the comparison of ignition risk to outage risk. While the analysis indicated a higher outage risk compared to ignition risk during R2 FPI conditions, this trade-off was observed to be significantly lower than the ignition risk to outage risk at higher FPI conditions.
- Any continued or additional measures PG&E is taking to minimize customer impact based on EPSS enablement:
  - In 2025, PG&E will continue to execute targeted proactive and reactive operational mitigation programs to support minimizing reliability impacts for customers in EPSS scope. PG&E will execute proactive and reactive Vegetation Management for Operational Mitigations (VMOM) intended to reduce the impacts of vegetation caused outages with a 2025 target of 6,500 trees. Areas with prior vegetation and unknown caused outage activity will be targeted for proactive tree trimming while areas experiencing vegetation caused outages throughout the year when EPSS is enabled will be reviewed for reactive vegetation management work.

- PG&E will continue to execute proactive and reactive animal mitigation work including avian protection improvements and critter abatement. PG&E anticipates retrofitting select locations with historical animal caused outage activity as well as performing incident-based mitigation work following animal and unknown caused outages during EPSS enablement. Improvements included in proactive mitigation, such as phase separation at poles, may additionally benefit improved longevity of other mitigation materials leveraged, reduced outages due to phase-to-phase contact, and maintenance of midspan phase separation, all of which are anticipated to support improved reliability. In 2025, the preliminary target for Proactive Animal Mitigations is 1,800 locations.
- In addition to vegetation management and animal mitigation improvements conducted in 2024, PG&E also greatly expanded the scope and installation of Gridscope units across select circuits in the HFRA to over 10,000 units. PG&E anticipates expanding installation to additional areas in 2025 to further enhance real time monitoring of potential risk and to augment situational awareness of potential ignition conditions on or interacting with PG&E's assets. Gridscope also supplements outage fault location and outage cause data, enabling PG&E crews to restore outages more quickly and effectively, whereby further reducing outage duration. PG&E is exploring opportunities to increase integration of Gridscope data in existing processes and procedures and leverage outage and situational details for improved real-time monitoring of system conditions.
- As in prior years, PG&E has identified operational and reliability improvement opportunities on critical equipment including asset repair and replacement. The EPSS program will continue to address Critical Operating Equipment (COE) leveraging a wildfire risk and customer reliability informed approach inclusive of HFRA and additional customer exposure.
- Additionally, in 2024, PG&E implemented improvements to near real-time outage tracking to provide enhanced fault location information for individual outages by leveraging typical load flows and probable fault locations. PG&E was able to reduce outage durations further by leveraging these improvements, enabling faster restoration for impacted customers, and will plan to continue leveraging these improvements in 2025.
- PG&E will continue to enhance its drone patrol program by conducting both proactive pre-season patrols and reactive drone patrols:
  - Reactive drone patrols will be conducted on an ad-hoc, as-needed basis in response to EPSS outage activity in 2025. Sections of circuits (CPZs) will be selected primarily based on unidentified EPSS outage activities or feedback from PG&E partners. New notifications/tags will be generated based on findings, or current/existing tags will be amended or upgraded to address updated findings.
  - The proactive pre-season drone patrol plan is currently under development.
- Additionally, the EPSS PMO will review the overall outage impacts and the outage journey experience for customers affected by EPSS outages and other outages during the non-peak season. PG&E is focusing on customers experiencing five or more EPSS outages annually since the EPSS program began, to identify contributing factors, assess previous work performed on their circuit protection zone, and determine suitable mitigation solutions for these customers who have been

significantly impacted over the duration of the program. The EPSS PMO will collaborate with PG&E's Reliability Team to explore additional opportunities to mitigate reliability impacts and further enhance service for customers affected by the program.

- PG&E continues to prioritize effective reliability mitigations on frequently impacted circuits. Specific actions PG&E has taken on its top 5 worst performing circuits in 2024 are listed below:
  - PETALUMA C 1109
    - 4 sets of Fault Indicators installed as a part of the Proactive Fault Indicator Program
    - Modified engineering settings on devices to improve coordination
  - SAN LUIS OBISPO 1104
    - 5 sets of Fault Indicators installed as a part of the Proactive Fault Indicator Program
    - Installed 2 FuseSavers on the circuit
    - Implemented animal mitigation equipment at 3 locations
    - Inspected and patrolled portion of circuit with drones.
  - SILVERADO 2102
    - 7 sets of Fault Indicators installed as a part of the Proactive Fault Indicator Program
    - Implemented animal mitigation equipment at 3 locations
    - Modified engineering settings on devices to improve coordination
  - SILVERADO 2104
    - 11 sets of Fault Indicators installed as a part of the Proactive Fault Indicator Program
    - Implemented animal mitigation equipment at 2 locations
    - Modified engineering settings on devices to improve coordination
    - Installed ad hoc Fault Indicators in response to outages
  - TEMPLETON 2113
    - 8 sets of Fault Indicators installed as a part of the Proactive Fault Indicator Program
    - Implemented animal mitigation equipment at 2 locations