State of California – A Natural Resources Agency
Gavin Newsom, Governor

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Caroline Thomas Jacobs, Director

August 21, 2024

To: Stakeholders for the San Diego Gas & Electric Company 2025 Wildfire Mitigation Plan Update

Enclosed is the Draft Decision of the Office of Energy Infrastructure Safety (Energy Safety), presenting its evaluation of the San Diego Gas & Electric Company 2025 Wildfire Mitigation Plan Update.

This Draft Decision is published for public review and comment. Opening comments must be submitted no later than September 10, 2024. Reply comments must be submitted no later than September 20, 2024.[1]

Comments must be submitted to Energy Safety's e-filing system in the 2023-2025 Wildfire Mitigation Plans docket (2023-2025-WMPs).[2]

Sincerely,

Tony Marino

Tony Marino
Acting Deputy Director | Electrical Infrastructure Directorate
Office of Energy Infrastructure Safety

[1] Dates falling on a Saturday or holiday have been adjusted to the next business day in accordance with Government Code section 6707 (https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=6707.&lawCode=GOV, accessed Aug. 8, 2024).

[2] Submit comments via the 2023-2025-WMPs docket on Energy Safety's e-filing system (https://efiling.energysafety.ca.gov/EFiling/DocketInformation.aspx?docketnumber=2023-2025-WMPs, accessed July 31, 2024).

OFFICE OF ENERGY INFRASTRUCTURE SAFETY

DRAFT DECISION

SAN DIEGO GAS & ELECTRIC COMPANY
2025 WILDFIRE MITIGATION PLAN UPDATE

AUGUST 2024

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1. Executive Summary

The Office of Energy Infrastructure Safety (Energy Safety) works to ensure electrical corporations take effective actions to reduce utility-related wildfire risk. This Decision approves San Diego Gas & Electric Company's (SDG&E's) 2025 Wildfire Mitigation Plan Update (2025 WMP Update), submitted on April 2, 2024.

In rendering this Decision, Energy Safety considered and incorporated comments from stakeholders and members of the public.

SDG&E provided a total of 102 reportable updates in its 2025 WMP Update. These include 19 updates to risk models, 51 changes to approved objectives, targets, and projected expenditures (10 changes to objectives, 19 changes to targets and projected expenditures, 22 changes to just projected expenditures), 13 quarterly inspection targets (11 quarterly asset inspection targets, 2 quarterly vegetation management inspection targets), 2 new or discontinued programs, and 17 reports on progress required for areas for continued improvement.

The above-listed updates encompass eight initiative categories. They include grid design, operations, and maintenance (including grid design and system hardening, equipment maintenance and repair, asset inspections, grid operations and procedures, and quality assurance and quality control); situational awareness and forecasting; emergency preparedness; Public Safety Power Shutoff; vegetation management and inspections; community outreach and engagement; risk methodology and assessment; and wildfire mitigation strategy development.

Energy Safety evaluated SDG&E's 2025 WMP Update and finds several strengths. For example, SDG&E reported sufficient information on its progress on 16 of the 17 areas for continued improvement from Energy Safety's Decision on its 2023-2025 Base WMP that required progress reports (see Section 11 for the area for continued improvement addressing the one insufficient progress report). Additionally, SDG&E reported plans to further improve its risk models (including 28 changes currently in progress that will be incorporated into version 4.0 of each risk model). SDG&E also provided a reportable update to increase the targets in four initiatives that will further reduce risk (such as its target for hotline clamp and expulsion fuse replacement). SDG&E provided sufficient justification for requesting extensions on its timeline for progress on initiatives.

SDG&E also has areas of its WMP that can be further developed and improved. Overall, SDG&E has 12 areas for continued improvement from Energy Safety's Decision on its 2023-2025 Base WMP for which SDG&E is required to demonstrate progress in its 2026-2028 Base WMP submittal.

2. Introduction and Background

San Diego Gas & Electric Company (SDG&E) submitted its 2023-2025 Wildfire Mitigation Plan (2023-2025 Base WMP) in 2023.[1] The Office of Energy Infrastructure Safety (Energy Safety) approved SDG&E's 2023-2025 Base WMP on October 13, 2023. On April 2, 2024, SDG&E submitted its 2025 Wildfire Mitigation Plan Update (2025 WMP Update). On July 5, 2024, SDG&E submitted its revised 2025 WMP Update[2] to its 2023-2025 Base WMP in accordance with Energy Safety's 2025 Wildfire Mitigation Plan Update Guidelines (2025 WMP Update Guidelines)[3] and Energy Safety's 2023-2025 Wildfire Mitigation Plan Process and Evaluation Guidelines (WMP Process Guidelines).[4]

Pursuant to Public Utilities Code section 8386.3(a), this Decision approves SDG&E's 2025 WMP Update to its 2023-2025 Base WMP.

2.1 Consultation with California Department of Forestry and Fire Protection

The Office of the State Fire Marshal is part of the California Department of Forestry and Fire Protection (CAL FIRE). Public Utilities Code section 8386.3(a) requires Energy Safety to consult with the Office of the State Fire Marshal in reviewing electrical corporations' WMPs and WMP Updates. The Office of the State Fire Marshal provided consultation and input into Energy Safety's evaluation, but this Decision is an action of Energy Safety and not the Office of the State Fire Marshal or CAL FIRE.

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[1] In accordance with Energy Safety 2023-2025 Wildfire Mitigation Plan Technical Guidelines (December 6, 2022) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true, accessed April 9, 2024).

[2] As discussed in Section 3.4, in response to Energy Safety's Notice on SDG&E Errata and Supplemental Reportable Updates (June 2024), SDG&E submitted SDG&E 2025 WMP Update (R2) (clean version, July 2024) and SDG&E 2023-2025 Base WMP (R5, redacted) (clean version, July 2024) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56861&shareable=true, accessed July 15, 2024, https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024, https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56957&shareable=true, accessed July 15, 2024) in addition to redlined versions of both of these documents.

[3] Energy Safety 2025 Wildfire Mitigation Plan Update Guidelines (adopted Jan. 2024, published Feb. 2024) (hereafter 2025 WMP Update Guidelines) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254&shareable=true, accessed May 6, 2024).

[4] Energy Safety 2023-2025 Wildfire Mitigation Plan Process and Evaluation Guidelines (Revised) (adopted Jan. 2024, published Feb. 2024) (hereafter Revised WMP Process Guidelines) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56255&shareable=true, accessed May 6, 2024).

2.2 Stakeholder Comments

Energy Safety invited stakeholders and members of the public to provide comments on the electrical corporations' 2025 WMP Updates and Revision Notices. Opening comments on SDG&E's 2025 WMP Update were due on May 7, 2024, and reply comments were due on May 17, 2024. The deadline to submit reply comments was extended to May 21, 2024.[5]

See Appendix E for lists of stakeholders and members of the public who submitted comments, including a summary of comments Energy Safety concurred with and incorporated into its evaluation.

[5] Deadline Extension for 2025 Wildfire Mitigation Plan Update Reply Comments (May 2024) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56689&shareable=true, accessed May 29, 2024).

3. Energy Safety 2025 WMP Update Evaluation Process

Energy Safety issued the following guidelines for electrical corporations' 2025 WMP Updates:

- **2025 Wildfire Mitigation Plan Update Guidelines (January 2024)** (hereafter 2025 WMP Update Guidelines), which sets forth reportable updates and general instructions for each electrical corporation's 2025 WMP Update.
- **2023-2025 Wildfire Mitigation Plan Process and Evaluation Guidelines (Revised January 2024)** (hereafter WMP Process Guidelines), which outlines the process for Energy Safety's evaluation of WMPs, details the public participation process, and establishes submission requirements for the electrical corporations.
- **2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (Revised January 2024)** and **2023-2025 Electrical Corporation Wildfire Mitigation Maturity Survey (Revised February 2024)** (hereafter Maturity Model and Maturity Survey), which together provide a quantitative method for assessing electrical corporation wildfire risk mitigation capabilities and examining how electrical corporations continue to improve in key areas of their WMPs.[6, 7]

3.1 Reportable Updates

Energy Safety's 2025 WMP Update Guidelines delineate the following five categories of updates that the electrical corporations are required to report:[8]

1. Updates to risk models
2. Updates to approved targets, objectives, and projected expenditures[9]
3. Quarterly inspection targets for 2025 for vegetation management and asset inspections

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[6] Energy Safety 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (revised and adopted Jan. 2024, published Feb. 2024) (hereafter Maturity Model) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56256&shareable=true, accessed May 6, 2024).

[7] Energy Safety 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Survey (adopted Jan. 2024, revised and published Feb. 2024) (hereafter Maturity Survey) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56306&shareable=true, accessed May 6, 2024).

[8] 2025 WMP Update Guidelines, "Reportable Updates," p. 3 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid= 56254&shareable=true, accessed May 6, 2024).

[9] Energy Safety's WMP evaluation and decision on a WMP is not an approval of, or agreement with, costs listed in the WMP.

4. New or discontinued programs
5. Progress on areas for continued improvement

The 2025 WMP Update Guidelines direct electrical corporations that they may not include any updates in their 2025 WMP Update that do not fall under one of these categories.[10]

The 2025 WMP Update Guidelines further direct that if an electrical corporation does not have any updates that fall within any of the above categories, it must affirm that it has no reportable updates for 2025 and that the information provided in its 2023-2025 Base WMP is current and accurate.[11]

3.2 Maturity Model and Survey

Energy Safety used the Maturity Model[12] and the electrical corporations' 2023 and 2024 responses to the Maturity Survey[13] to assess the maturity of each electrical corporation's wildfire risk mitigation program.[14]

The Maturity Model consists of 37 individual capabilities describing the ability of electrical corporations to mitigate wildfire risk and Public Safety Power Shutoff (PSPS) risk within their service territory.[15] The 37 capabilities are aggregated into 7 categories.[16] Maturity levels range from 0 (below minimum requirements) to 4 (beyond best practice). For each electrical corporation, Energy Safety calculated maturity levels for each capability, each category, five

[10] 2025 WMP Update Guidelines, p. 3 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254&shareable=true, accessed March 29, 2024).

[11] 2025 WMP Update Guidelines, p. 3 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254&shareable=true, accessed March 29, 2024).

[12] Maturity Model (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56256&shareable=true, accessed May 6, 2024).

[13] Maturity Survey (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56306&shareable=true, accessed May 6, 2024).

[14] Energy Safety revised the 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model and Maturity Survey in January 2024. The revisions did not result in any changes to Maturity Survey questions, therefore the responses from 2024 are directly comparable to the responses from 2023. See the Maturity Survey issued by Energy Safety to the electrical corporations in 2023:
Revised Final 2023 Electrical Corporation Wildfire Mitigation Maturity Survey (April 2023)
(https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53708&shareable=true, accessed May 6, 2024)

[15] Maturity Model, Section 1, "Introduction" (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56256&shareable=true, accessed April 9, 2024).

[16] Maturity Model, Section 3.1, "Capabilities and Categories" (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56256&shareable=true, accessed April 9, 2024).

cross-category themes, and the overall WMP, based on the electrical corporation's answers to Maturity Survey questions and the scoring system described in the Maturity Model.[17]

Appendix F summarizes SDG&E's 2024 Maturity Survey results and changes in SDG&E's maturity compared to its 2023 Maturity Survey results.

3.3 Areas for Continued Improvement

Energy Safety's Decisions on the 2023-2025 Base WMPs focused on each electrical corporation's strategies for reducing the risk of utility-related ignitions. In those Decisions, Energy Safety identified areas where the electrical corporation must continue to improve its wildfire mitigation capabilities in future plans. For some areas, the electrical corporation was required to report its progress in its 2025 WMP Update. Energy Safety discusses the results of its evaluation of the electrical corporation's progress in each of those areas in Sections 5 through 9 of this Decision.

3.4 Errata

Energy Safety requested that SDG&E submit a new version of its 2025 WMP Update and revised 2023-2025 Base WMP incorporating corrections to non-substantive errata identified by Energy Safety.[18] In response, SDG&E submitted corrected versions of its 2025 WMP Update and revised 2023-2025 Base WMP on July 5, 2024.[19, 20] The corrected versions fixed errors including typos, errors in redlining, and inappropriate use of references to the 2025 WMP Update in lieu of describing changes in the revised 2023-2025 Base WMP.

Energy Safety considered SDG&E's corrected versions of its 2025 WMP Update and revised 2023-2025 Base WMP in its evaluation.

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[17] Maturity Model, Section 4, "Maturity Level Determination" (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56256&shareable=true, accessed April 9, 2024).

[18] Notice on SDG&E Errata and Supplemental Reportable Updates (June 2024) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56861&shareable=true, accessed July 15, 2024).

[19] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024);

SDG&E 2025 WMP Update (R2) (redline version, July 5, 2024) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56956&shareable=true, accessed July 15, 2024).

[20] SDG&E 2023-2025 Base WMP (R5, redacted) (clean version, July 5, 2024) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56957&shareable=true, accessed July 15, 2024); SDG&E 2023-2025 Base WMP (R5, redacted) (redline version, July 5, 2024) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56958&shareable=true, accessed July 15, 2024).

3.5 Revision Notice

Public Utilities Code section 8386.3(a) states, "Before approval, [Energy Safety] may require modifications of the [WMP]." If Energy Safety requires modifications to a WMP, it does so by issuing a Revision Notice to an electrical corporation.[21]

Energy Safety did not issue SDG&E a Revision Notice for its 2025 WMP Update.

3.6 Decision

In its evaluation of an electrical corporation's 2025 WMP Update, Energy Safety considers the information provided by the electrical corporation regarding its reportable updates and the associated justifications. Energy Safety's approval of a 2025 WMP Update constitutes collective approval of the reported items in the electrical corporation's 2025 WMP Update. The approval therefore authorizes the updates to the electrical corporation's 2023-2025 Base WMP, as shown in the "Redlined 2023-2025 Base WMP" and "Clean Updated 2023-2025 Base WMP" provided as part of the electrical corporation's 2025 WMP Update submission.[22]

Energy Safety recognizes that planning for wildfire risk is a maturing capability and expects that electrical corporations will continue to improve year over year. Therefore, Energy Safety's Decision includes areas for continued improvement, identifying areas where the electrical corporation must continue to mature in its capabilities.

SDG&E's updates reduce risk, increase efficiencies, and increase the transparency of SDG&E's decision-making processes. Therefore, Energy Safety approves SDG&E's 2025 WMP Update.

[21] Revised WMP Process Guidelines, Section 4.4, "Revision Notice," pp. 6-8 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56255&shareable=true, accessed May 6, 2024).

[22] 2025 WMP Update Guidelines, pp. 3-4 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254&shareable=true, accessed March 29, 2024).

4. SDG&E 2025 WMP Update

In accordance with the 2025 WMP Update Guidelines,[23] SDG&E provided the following for its 2025 WMP Update submission:

1. **2025 WMP Update**: A standalone 2025 WMP Update document that describes SDG&E's reportable updates, or confirmation of no updates to the approved 2023-2025 Base WMP.
2. **Redlined 2023-2025 Base WMP**: A redlined version of SDG&E's 2023-2025 Base WMP showing reportable updates to the approved 2023-2025 Base WMP.
3. **Clean Updated 2023-2025 Base WMP**: A clean, updated copy of SDG&E's 2023-2025 Base WMP (i.e., without any updates marked in redline) incorporating the reportable updates from SDG&E's 2025 WMP Update as demonstrated in the redlined version.

Specifically, in response to the five categories of reportable updates of the 2025 WMP Update Guidelines, SDG&E provided the required information for each category. Energy Safety discusses each reportable update under the relevant mitigation initiative in Sections 5 through 9 of this Decision.

[23] 2025 WMP Update Guidelines, pp. 3-4 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56254&shareable=true, accessed May 6, 2024).

5. Overview of the Service Territory

In its 2025 WMP Update, SDG&E did not report any updates to the overview of the service territory section of its 2023-2025 Base WMP.

6. Risk Methodology and Assessment

In its 2025 WMP Update, SDG&E reported significant risk model updates, as discussed below.[24]

6.1 Risk Model Updates

SDG&E reported the following significant risk model updates of its Wildfire Next Generation System (WiNGS) Planning model:

- Upgrading the risk assessment for the likelihood of a PSPS risk event by implementing "4 kilovolt (kV) to 12 kV connectivity to account for circuit segment dependencies."[25]
- Updating the weather station wind gust attribute by revising the historical weather station data during fire season periods.[26]
- Enabling "dynamic upstream tracing" for calculating and enhancing accuracy of "upstream PSPS probability estimates for each sectionalizing device."[27]

SDG&E also reported qualitative modeling enhancements for both its WiNGS-Planning and WiNGS-Ops models (reported in response to area for continued improvement SDGE-23B-07[28] "Third-Party Recommendations for Model Improvements," discussed further in Section 7.1.3). SDG&E reported that its model updates resulted in shifts in its top risk-contributing circuit segments, as discussed further below.

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[24] 2025 WMP Update Guidelines, Section 1, "Updates to Risk Models," p. 6 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid= 56254&shareable=true, accessed May 6, 2024).

[25] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 3 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[26] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 4 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[27] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 4 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[28] Energy Safety is instituting a new naming convention for its areas for continued improvement. Moving forward, areas for continued improvement identified in Energy Safety's evaluation of Base WMPs will be designated with a "B" and areas for continued improvement identified in Energy Safety's evaluation of WMP Updates will be designated with a "U." Accordingly, areas for continued improvement that were identified in Energy Safety's evaluation of 2023-2025 Base WMPs are retitled "23B" and new areas for continued improvement identified in Energy Safety's evaluation of 2025 Update WMPs herein are titled "25U."

Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.[29]

6.1.1 Energy Safety Evaluation

As a result of these significant risk model updates, SDG&E's wildfire mitigation prioritization has changed. SDG&E stated that when it ranked its circuit segments for wildfire risk, 2 percent of the segments that were initially in the highest 5 percent of wildfire risk changed prioritization ranking (i.e. moved in or out of the top 5 percent) due to its risk model updates. Additionally, SDG&E stated that when it ranked its circuit segments for PSPS risk, approximately 50 percent of the segments that were initially in the highest 5 percent of wildfire risk changed prioritization ranking for PSPS risk (i.e., moved in or out of the top 5 percent) due to its risk model updates.[30]

In response to these risk model updates, Energy Safety finds that each of SDG&E's modeling updates are likely to result in improvements that provide a more accurate understanding of risk, particularly when it comes to PSPS impacts and granularity for PSPS risk analysis. For example, implementing analysis to evaluate upstream PSPS risk and more accurate understanding of sectionalization allows SDG&E to better understand the greater scope of potential PSPS events when implementing proper scope for mitigations.

Additionally, refreshing the wind speed data allows for a more accurate understanding of wind trends throughout its system, especially due to the installment of additional weather stations, allowing for greater granularity.

6.1.2 Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for SDG&E in the risk methodology and assessment section. In its 2026-2028 Base WMP, SDG&E must report its progress on any existing areas for continued improvement specified in Energy Safety's Decision on SDG&E's 2023-2025 Base WMP.[31]

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[29] 2025 WMP Update Guidelines, "Reportable Updates," p. 3 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid= 56254&shareable=true, accessed May 6, 2024).

[30] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 3 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[31] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

6.2 2023 Areas for Continued Improvement

As required by Energy Safety's Decision on SDG&E's 2023-2025 Base WMP[32] SDG&E reported its progress on four areas for continued improvement in the risk methodology and assessment section in its 2025 WMP Update.

6.2.1 SDGE-23B-01. Cross-Utility Collaboration on Risk Model Development

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety required SDG&E and the other investor-owned utilities (IOUs)[33] to continue participating in the Energy Safety-led risk modeling working group, [34] as established by the 2021 WMP Action Statements.[35]

In response, SDG&E discussed its continued participation in the risk modeling working group meetings, and how the meetings have provided valuable insight and input from other IOUs and stakeholders.

6.2.1.1 Energy Safety Evaluation

SDG&E sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in SDG&E's 2026-2028 Base WMP.

6.2.2 SDGE-23B-02. Calculating Risk Scores Using Maximum Consequence Values

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety found that SDG&E's use of maximum consequence values to aggregate risk scores needed to be improved upon to better meet fundamental mathematical standards and make proper mitigation prioritization decisions.[36] As a result, in its 2025 WMP Update, Energy Safety required SDG&E to either

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[32] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[33] The IOUs include Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas and Electric Company (SDG&E), Bear Valley Electric Service (BVES), Liberty Utilities (Liberty), and PacifiCorp.

[34] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 80 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[35] Energy Safety Action Statement on SDG&E 2021 WMP Update (July 20, 2021) SDGE-21-02, p. 7 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=51674&shareable=true, accessed May 31, 2024).

[36] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023) pp. 80-81 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

provide a plan for adopting probability distributions, offer an alternative strategy, or prove that its current methodologies were accurate outputs of calculating known risk.

In response, SDG&E provided a plan for transitioning toward probability distributions by the 2026-2028 Base WMP cycle.[37] This plan includes the following milestones: transitioning to a span-level model, performing exploratory data analysis on wildfire consequence probability distributions, generating a distribution of wildfire consequence values, deciding on which consequence model to use, using the nearest neighbors approach to fill in missing FireSight values, performing research and development and then evaluation for mitigation impacts, transitioning from risk-spend efficiency (RSE) estimates to cost-benefit ratios, enhancing its WiNGS-Planning visualization platform, and then user acceptance.[38] These various milestones are slated to occur starting in Q2 2024 until SDG&E's submission of its 2026-2028 Base WMP.

6.2.2.1 Energy Safety Evaluation

Energy Safety finds SDG&E's current plan to transition toward probability distributions is adequate—as the proposed approach is consistent with an approach that would allow SDG&E to meet fundamental mathematical standards and make proper mitigation prioritization decisions—and meets the requirements for SDGE-23B-02. SDG&E must continue to report on its progress for its plan, including any outcomes that may impact the transition and whether target implementation dates were met.

Energy Safety has modified the area for continued improvement to provide additional guidance for SDG&E. SDG&E must respond to this revised area for continued improvement in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for SDG&E, including the specific required progress that SDG&E must address in its 2026-2028 Base WMP.

6.2.3 SDGE-23B-03. PSPS and Wildfire Risk Trade-Off Transparency

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety found that SDG&E did not adequately describe how it evaluates the various trade-offs between PSPS and wildfire risk when determining mitigation selection.[39] Energy Safety required SDG&E to provide additional

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[37] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 9 "WiNGS-Planning Cost/Benefit Transition Plan," p. 44 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

[38] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 9 "WiNGS-Planning Cost/Benefit Transition Plan," p. 44 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[39] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023) p. 81 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

details on how it prioritizes PSPS risk within its decision-making process and explain how the rank order of its planned mitigation initiatives compares to the rank order of mitigation initiatives ranked by risk buy-down estimate.

In response, SDG&E provided further clarification on its decision-making process, including a high-level flowchart demonstrating its mitigation prioritization. This included discussing how PSPS risk mitigation benefits are determined during the scoping process, and how undergrounding is the first mitigation to be evaluated for RSE due to the associated PSPS risk reductions.[40] SDG&E also provided a table that shows its comparison of planned mitigation initiatives rankings based on wildfire and PSPS risk.[41]

6.2.3.1 Energy Safety Evaluation

SDG&E provided information on its decision-making process, leading to greater transparency into how SDG&E integrates wildfire risk and PSPS risk into its considerations. SDG&E also provided examples of how PSPS risk may impact project prioritization, as three of the projects listed in the table were delayed due to the projects having limited or no additional PSPS risk mitigation benefit.[42] With that, SDG&E sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in SDG&E's 2026-2028 Base WMP.

6.2.4 SDGE-23B-04. Incorporation of Extreme Weather Scenarios into Planning Models

In response to the area for continued improvement "Incorporation of Extreme Weather Scenarios into Planning Models" from Energy Safety's Decision on SDG&E's 2023-2025 Base WMP,[43] SDG&E reported that it will provide an update on its progress on developing statistical estimates of potential wind events over at least the maximum asset life for its system and evaluating results from incorporating these estimates into WiNGS-Planning in its 2026-2028 Base WMP. [44]

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[40] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 45 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[41] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 10 "Ranking of Planned Mitigation Initiatives," pp. 48-50 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[42] SDG&E's 2025 WMP Update (R2) (clean version, July 5, 2024), Table 10 "Ranking of Planned Mitigation Initiatives," pp. 48-50 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[43] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023) pp. 81-82 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[44] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 51 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

7. Wildfire Mitigation Strategy Development

In its 2025 WMP Update, SDG&E provided three updates related to the wildfire mitigation strategy development section of its 2023-2025 Base WMP. The updates SDG&E provided related to this section included reporting required progress on three areas for continued improvement.

7.1 2023 Areas for Continued Improvement

As required by Energy Safety's Decision on SDG&E's 2023-2025 Base WMP,[45] SDG&E reported its progress on three areas for continued improvement in the wildfire mitigation strategy development section in its 2025 WMP Update.

7.1.1 SDGE-23B-05. Cross-Utility Collaboration on Best Practices for Inclusion of Climate Change Forecasts in Consequence Modeling, Inclusion of Community Vulnerability in Consequence Modeling, and Utility Vegetation Management for Wildfire Safety

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety found that SDG&E did not make substantive efforts to collaborate with other IOUs[46] in the areas of climate change forecasts in consequence modeling, community vulnerability in consequence modeling, and utility vegetation management for wildfire safety.[47]

Accordingly, Energy Safety required SDG&E to participate in all Energy Safety-organized activities related to best practices for:[48]

- Inclusion of climate change forecasts in consequence modeling.

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[45] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[46] The IOUs include Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas and Electric Company (SDG&E), Bear Valley Electric Service (BVES), Liberty Utilities (Liberty), and PacifiCorp.

[47] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 82 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[48] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 82 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed July 16, 2024)

- Inclusion of community vulnerability in consequence modeling.
- Utility vegetation management for wildfire safety.

Energy Safety also required SDG&E to collaborate with the other IOUs on the above-mentioned best practices.[49] Energy Safety required SDG&E to provide a status update on any cross-utility collaboration on the topics listed above, including a list of any resulting changes to its WMP since its 2023-2025 Base WMP.[50]

SDG&E stated that it participated in Energy-Safety sponsored scoping meetings in 2023. SDG&E also stated that it scheduled recurring meetings with PG&E and SCE including a monthly joint IOU call for discussion regarding various aspects of the WMP.[51] Additionally, SDG&E stated that it began meeting with PG&E and SCE in 2023 to discuss fuels management.[52] Finally, SDG&E stated that it participated in two working sessions on woody debris and vegetation with PG&E and SCE in 2023.[53]

7.1.1.1 Energy Safety Evaluation

The original area for continued improvement directed all of the IOUs to collaborate. The IOUs include not only the large IOUs (SDG&E, PG&E, and SCE), but also the small and multi-jurisdictional utilities (SMJUs) (Bear Valley Electric Service, Liberty Utilities, and PacifiCorp). Energy Safety notes that this same area for continued improvement is present in the 2023

[49] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 82 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed July 16, 2024)

[50] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 82 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed July 16, 2024)

[51] SDG&E 2025 WMP Update Rev. 2 (July 5, 2024), p. 52 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 16, 2024).

[52] SDG&E 2025 WMP Update Rev. 2 (July 5, 2024), pp. 52-53 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 16, 2024).

[53] SDG&E 2025 WMP Update Rev. 2 (July 5, 2024), p. 52 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 16, 2024).

WMP Decisions for the SMJUs.[54, 55, 56] While SDG&E demonstrated the first step by collaborating with the other large IOUs, it must also make efforts to include the SMJUs. Accordingly, in its 2026-2028 Base WMP, SDG&E must continue its collaboration efforts and demonstrate that it has made efforts to include Bear Valley, Liberty Utilities, and PacifiCorp in these efforts, where appropriate and relevant to each IOU's interests.

Energy Safety has modified the area for continued improvement to provide additional guidance for SDG&E. SDG&E must respond to this revised area for continued improvement in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for SDG&E, including the specific required progress that SDG&E must address in its 2026-2028 Base WMP.

7.1.2 SDGE-23B-06. Demonstration of Proper Decision Making for Selection of Undergrounding Projects

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety found that SDG&E often prioritized undergrounding over other mitigation strategies without adequate justification.[57] For example, SDG&E's WiNGS-Planning Model did not incorporate the time value of risk, which could bias mitigations toward undergrounding over mitigation initiatives with shorter deployment timeframes, such as covered conductor.[58] Additionally, SDG&E did not

[54] Energy Safety Decision on Bear Valley Electric Service, Inc. 2023-2025 Base Wildfire Mitigation Plan (Nov. 2023), BVES-23-03, "Cross-Utility Collaboration on Best Practices for Inclusion of Climate Change Forecasts in Consequence Modeling, Inclusion of Community Vulnerability in Consequence Modeling, and Utility Vegetation Management for Wildfire Safety," p. 74 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55945&shareable=true, accessed June 5, 2024).

[55] Energy Safety Decision on Liberty Utilities 2023-2025 Base Wildfire Mitigation Plan (Feb. 2024), Liberty-23-05, "Cross-Utility Collaboration on Best Practices for Inclusion of Climate Change Forecasts in Consequence Modeling, Inclusion of Community Vulnerability in Consequence Modeling, and Utility Vegetation Management for Wildfire Safety," p. 75 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56276&shareable=true, accessed June 5, 2024).

[56] Energy Safety Decision on PacifiCorp 2023-2025 Base Wildfire Mitigation Plan (Feb. 2024), PC-23-07, "Cross-Utility Collaboration on Best Practices for Inclusion of Climate Change Forecasts in Consequence Modeling, Inclusion of Community Vulnerability in Consequence Modeling, and Utility Vegetation Management for Wildfire Safety," p. 83 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56309&shareable=true, accessed June 5, 2024).

[57] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), pp. 82-83 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[58] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 32 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

adequately disclose its risk drivers at specific locations, leading to an apparent overall preference for undergrounding.[59]

Accordingly, in its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety required SDG&E to demonstrate in its 2025 WMP Update risk reduction for all areas planned for undergrounding, accounting for all risk drivers.[60] Energy Safety also required SDG&E in its 2025 WMP Update to provide an analysis that demonstrated its process for selecting undergrounding projects, including a range of specific variables.[61]

In its 2025 Update SDG&E provided its WiNGS-Planning model risk mitigation selections, including all the variables Energy Safety required.[62] SDG&E also provided more insight into how it values mitigations such as covered conductor versus undergrounding.[63]

SDG&E stated that its current system relies heavily on Public Safety Power Shutoffs (PSPS) and situational awareness interventions to mitigate risk.[64] SDG&E also stated that it plans to utilize the WiNGS-Planning model to decrease both wildfire risk and PSPS de-energization.[65] SDG&E stated that the WiNGS-Planning model anticipates a portfolio of around 1,500 miles of undergrounding and 370 miles of covered conductor installations between 2022 and 2032.[66]

SDG&E provided the iterative steps for each part of its mitigation selection process, including how and when undergrounding and covered conductor are considered for targeted circuit segments.[67] SDG&E first compares each mitigation's RSE estimates to its RSE threshold to

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[59] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 32 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[60] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 82 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[61] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), pp. 82-83 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[62] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), pp. 54-65 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[63] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), pp. 54-65 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[64] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 54 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[65] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 54 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[66] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 54 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[67] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), pp. 56-65 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

decide which of its circuit segments qualify for covered conductor or undergrounding.[68] After establishing the RSE thresholds for undergrounding and covered conductor, SDG&E implements a decision tree to decide which mitigation to evaluate in the final model output.[69] SDG&E also provided a copy of this decision tree in its 2025 Update.[70] Once the WiNGS planning model supplies a recommendation, SDG&E scoping engineers preform a desktop feasibility study (that includes PSPS) to weigh the practicality of this mitigation recommendation in the final step of SDG&E's mitigation selection process.[71]

In addition to explaining all the steps in its mitigation selection process, SDG&E also provided insight into how its WiNGS planning model utilizes different drivers to determine the effectiveness of undergrounding versus other mitigations. For example, SDG&E stated that the WiNGS planning model incorporates a location-specific driver ignition analysis that utilizes an ignition rate normalization process.[72] This process begins with the annual ignition rate in the high fire threat district (HFTD), then adds in variables such as hardening percentages, wind gusts, asset health, and tree strike potential.[73]

SDG&E stated that it is currently conducting studies to evaluate the effectiveness of undergrounding versus other mitigations.[74] For one study, underway in 2024, SDG&E engaged a third-party vendor to both analyze the costs and benefits of "increasing covered conductor effectiveness"[75] and to compare different types of mitigations to undergrounding.[76] The other study, conducted in 2023, analyzed how undergrounding and covered conductor affected

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[68] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 56 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[69] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 56 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[70] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 57 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[71] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 57 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[72] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 59 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[73] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 59 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[74] SDG&E's 2025 WMP Update (R2) (clean version, July 5, 2024), p. 59 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[75] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 59 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[76] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 59 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

PSPS customer impact reduction.[77] SDG&E stated it currently uses efficacy rates of 100 percent for undergrounding and 64 percent for covered conductor in its WiNGS planning model, and plans to maintain unless additional studies support adjustments to these efficacy rates.[78]

7.1.2.1 Energy Safety Evaluation

SDG&E provided all the information this area for continued improvement required: an explanation of the overall risk reduction and risk drivers, SDG&E's analysis for selecting undergrounding projects, and the range of specific variables it uses to make these selections. Therefore, SDG&E sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in SDG&E's 2026-2028 Base WMP.

7.1.3 SDGE-23B-07. Third-Party Recommendations for Model Improvements

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety found that while SDG&E retained a third-party consultant to review its risk modeling, it did not provide a plan to implement the consultant's recommendations.[79] Accordingly, in its 2025 Update Energy Safety required SDG&E to include an implementation update on the following recommended improvements:[80]

- Inclusion of its Vegetation Risk Index and/or other measurement of vegetation-related risk and how this index informs vegetation management decisions.
- Use of its risk model to inform mitigation work outside of grid hardening.
- Sensitivity analysis for risk buy-down, mitigations, and PSPS models.
- Elimination of double-counting of conductor age and circuit health index within models.

Energy Safety also required SDG&E to include in its 2025 WMP Update how it implemented a selection of the consultant's recommendations and provide a list of recommendations with a

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[77] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 59 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[78] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 60 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[79] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 83 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[80] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 83 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed July 17, 2024).

timeline for implementing recommendations, or an explanation why SDG&E is not implementing recommendations.[81]

In its 2025 Update, SDG&E included a table of all third-party recommendations for the WiNGS planning model with the associated implementation timelines,[82] along with explanations of how it implemented (or plans to implement) the selected recommendations.[83]

In its 2025 Update, SDG&E explained how it incorporated vegetation risk in its risk modeling. In 2023, SDG&E developed a vegetation priority risk model using a selection of risk-related attributes to understand which trees could pose a higher risk to electrical infrastructure.[84] SDG&E stated that based on the results of testing this model, in 2024 the model will move to a span-based model, rather than a tree-based model.[85] In the WiNGS planning model, SDG&E expanded the tree strike index to include its entire service territory, and all updates are now performed in-house without the need for consultant updates.[86]

In its 2025 Update, SDG&E stated that the current version of the WiNGS planning model does not assess mitigations outside of its undergrounding or covered conductor grid hardening initiatives.[87] SDG&E stated that beginning in 2024 the WiNGS planning model could be expanded to include more mitigations pending its assessment of the efficacy of a combination of mitigations. However, SDG&E stated that currently any mitigation work outside of the two aforementioned grid hardening mitigations is conducted on consequence modeling that is based on the HFTD.[88]

In its 2025 Update, SDG&E also stated that it conducted a sensitivity analysis. The sensitivity analysis studied whether mixed mitigations increased the efficacy of its covered conductor program, and how that efficacy affected both individual mitigations and SDG&E's entire

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[81] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 83 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed July 17, 2024).

[82] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), pp. 68-84 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[83] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), pp. 68-84 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[84] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 66 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 17, 2024).

[85] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 66 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 17, 2024).

[86] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 66 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 17, 2024).

[87] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 67 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 17, 2024).

[88] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 67 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 17, 2024).

portfolio.[89] The resulting analysis shifted two projects to covered conductor from undergrounding, and 20 projects to covered conductor from no selected mitigations.[90] SDG&E stated that it plans to continue its sensitivity analysis in the 2023-2025 WMP cycle.

Finally, SDG&E stated that it plans to use its ignition rate revision project to clear its conductor age double-counting issue in the first half of 2024,[91] which it stated will remove duplicative usage of covered conductor age to assess risk via two workstreams.[92] The first will incorporate the new WiNGS-Ops ignition rate into the model, which no longer includes the Circuit Health Index or conductor age adjustments.[93] In the second workstream, SDG&E plans to develop a new ignition rate for the WiNGS planning model that eliminates sequential ignition rate adjustments to further eliminate any double-counting.[94]

7.1.3.1 Energy Safety Evaluation

SDG&E provided an implementation update on the recommended improvements as required by this area for continued improvement, including a list of all third-party recommended improvements and a timeline for implementation. However, because SDG&E stated that it would implement many recommendations in 2024 and 2025, Energy Safety sees value in having SDG&E provide an update on its progress in implementing the recommendations.[95] Accordingly, SDG&E must provide an update on its implementation of the consultant's recommendations in its 2026-2028 Base WMP.

Energy Safety has modified the area for continued improvement to provide additional guidance for SDG&E. SDG&E must respond to this revised area for continued improvement in its 2026-2028 Base WMP.

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[89] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 67 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 17, 2024).

[90] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 67 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 17, 2024).

[91] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 67 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 17, 2024).

[92] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 67 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 17, 2024).

[93] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 67 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 17, 2024).

[94] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 67 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 17, 2024).

[95] SDG&E's 2025 WMP Update (R2) (clean version, July 5, 2024), p 66 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

7.2 New or Discontinued Programs

In its 2025 WMP Update, SDG&E did not report any new or discontinued programs related to the wildfire mitigation strategy development section of its 2023-2025 Base WMP.

7.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, SDG&E reported updates to its projected expenditures related to the wildfire mitigation strategy development section of its 2023-2025 Base WMP. Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.

Specifically, SDG&E reported updates to its projected expenditures for two initiatives: WMP Data Platform (WMP.519) and Allocation Methodology Development and Application (WMP.523).

For the WMP Data Platform initiative, SDG&E reported an increase of 96 percent in its projected operations and maintenance (O&M) expenditures due to the increased scope of its WiNGS Visualization Platform.[96] For Allocation Methodology Development, SDG&E reported a decrease of 85 percent in its projected capital expenditures[97] and a decrease of 31 percent in its projected O&M expenditures.[98]

7.3.1 Energy Safety Evaluation

SDG&E's increased spending on its WiNGS Visualization Platform is appropriate given its updates to the WiNGS models to include the cost-benefit risk approach for its 2026-2028 Base

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[96] For the WMP Data Platform initiative's projected O&M expenses, SDG&E originally reported $7,833 and in the 2025 Update reported $15,331, for an increase of 96 percent. SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[97] For the WMP Allocation Methodology Development and Application initiative's projected capital expenses, SDG&E originally reported $7,297 and in the 2025 Update reported $1,106, for a decrease of 85 percent. SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 16, 2024).

[98] For the WMP Allocation Methodology Development and Application initiative's projected O&M expenses, SDG&E originally reported $7,988 and in the 2025 Update reported $5,524, for a decrease of 31 percent. SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 16, 2024).

WMP.[99] Moreover, the 96 percent increase in the Data Platform Initiative combined with an 85 percent decrease in the Allocation Methodology Initiative equates to only a modest increase overall. Finally, the 31 percent decrease in O&M for the Allocation Methodology is appropriate because SDG&E stated that this funding was reallocated due to an expected increase in PSPS protocols that never materialized.[100] This projected O&M expenditure decrease is consistent with the scope of the PSPS program.

7.3.2 Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for SDG&E in Targets, Objectives, and Projected Expenditures. In its 2026-2028 Base WMP, SDG&E must report its progress on any existing areas for continued improvement specified in Energy Safety's Decision on SDG&E's 2023-2025 Base WMP. [101]

[99] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), pp. 42-43 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[100] "The 2025 projected O&M expenditures were decreased to align with 2023 actual expenditures. Plans to add additional headcount to manage PSPS protocols have been placed on hold as PSPS de-energizations and reporting have been effectively managed with the current personnel" per SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 38 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[101] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

8. Wildfire Mitigation Initiatives

This section provides Energy Safety's evaluation of SDG&E's reportable updates related to the following wildfire mitigation initiatives:

- Grid design, operations, and maintenance, including grid design and system hardening, asset inspections, equipment maintenance and repair, and grid operations and procedures
- Vegetation management and inspections
- Situational awareness and forecasting
- Emergency preparedness
- Community outreach and engagement

Energy Safety discusses its evaluation of SDG&E's reportable updates related to PSPS in Section 9. Energy Safety includes discussion of any reportable updates affecting SDG&E's process for continuous improvement in Section 10.

8.1 Grid Design, Operations, and Maintenance

In its 2025 WMP Update, SDG&E provided 54 updates related to the grid design, operations, and maintenance section of its 2023-2025 Base WMP. The updates SDG&E provided related to this section included reporting on required progress on eight areas for continued improvement, reporting no new or discontinued programs, and reporting updates to 11 approved targets with associated projected expenditures, 13 projected expenditures without associated target updates, seven approved targets with no associated projected expenditures, and five objectives. SDG&E also updated 11 quarterly asset inspection targets.

8.1.1 Grid Design and System Hardening

8.1.1.1 2023 Areas for Continued Improvement

As required by Energy Safety's Decision on SDG&E's 2023-2025 Base WMP,[102] SDG&E reported its progress on four areas for continued improvement in the grid design and system hardening section in its 2025 WMP Update.

[102] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), pp. 84-86 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

SDGE-23B-08. Continuation of Grid Hardening Joint Studies

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety required that SDG&E and other IOUs report in the Joint IOU[103] Covered Conductor Working Group Report[104] on the progress and outcomes of studies and meetings related to grid hardening.[105, 106] Energy Safety required that these reports include next steps, lessons learned, applicable changes with timelines, and summaries of both completed and planned workshops. This included submitting updates related to the Joint IOU Covered Conductor Working Group Report, as initiated by Energy Safety's 2021 WMP Update Final Action Statements and provided initially in 2022,[107] as well as a new report that includes evaluation for: the effectiveness of undergrounding, lessons learned from applying undergrounding, various approaches to protective equipment and device settings, progress on new technologies, and effectiveness of mitigations in combination with one another.

In response, the joint IOUs expanded the existing Joint IOU Covered Conductor Working Group, established when responding to the initial required report in 2021, to include additional workstreams covering the required topics.[108] To cover the workstreams, the IOUs conducted bi-weekly meetings to review testing results and held workshops with Energy Safety to discuss corrosion testing, aging susceptibility testing, and the status of remaining testing results. The IOUs concluded that the corrosion testing showed minor aluminum degradation below the covering, with copper covered conductor performing similarly to exposed bare conductors. Based on the discussions and supplemental testing results, the Joint IOUs concluded that no additional testing is warranted at this time. The joint IOUs also discussed the effectiveness of covered conductor, sharing lessons learned and practices for new technologies, and concluded that no additional technology considerations were needed.

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[103] Here the joint IOUs include SDG&E, PG&E, SCE, PacifiCorp, Bear Valley Electric Service, Inc., and Liberty Utilities per SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), footnote 21, p. 86 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed, July 15, 2024).

[104] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Section 5.8.1 "Joint IOU Covered Conductor Working Group Report," pp. 86-88 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[105] Energy Safety Decision on SDG&E 2022 WMP Update (July 5, 2022) pp. 112-113 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=52635&shareable=true, accessed July 17, 2024).

[106] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), pp. 84-85 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[107] Energy Safety Action Statement on SDG&E 2021 WMP Update (July 20, 2021), SDGE-21-02, p. 7 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=51674&shareable=true, accessed Aug. 19, 2024).

[108] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Section 5.8.1 "Joint IOU Covered Conductor Working Group Report," pp. 86-88 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

Lastly, each IOU reviewed unit costs of covered conductor and undergrounding and gained a better understanding of cost drivers.

In its 2025 WMP Update, SDG&E reported that it used the information obtained while participating in the joint IOU working groups to update its understanding of the effectiveness of covered conductor installation (WMP.455) and covered conductor installation combined with falling conductor protection (FCP) (WMP.463) and early fault detection (EFD) (WMP.1195).[109]

SDG&E clarified that in the 2023-2025 Base WMP, ignition driver effectiveness and ignition data were used to calculate the estimated effectiveness of covered conductor.[110] SDG&E stated that this approach did not align with the calculation of the effectiveness of other initiatives or with how other large IOUs utilize risk event data for effectiveness calculations. SDG&E reported that it updated its calculations in 2023 to include risk event data, which uses a much larger data set (including over 2,000 events) than the ignitions data set (including 60 events).[111] SDG&E stated that it also used the outputs of covered conductor testing and benchmarking with the other IOUs to update the effectiveness of covered conductor installation to prevent common risk event drivers.

In addition, SDG&E stated that it projected a reduced effectiveness of covered conductor against various equipment failure risk drivers in 2024 for several reasons.[112] SDG&E stated that initially the estimated effectiveness against equipment failure drivers was defined by the immediate protection gained from installing new equipment. However, SDG&E clarified that for long-term investment planning, it is more appropriate to use a long-term effectiveness value. Therefore, previous studies on traditional (bare conductor) hardening were used to estimate the effectiveness of covered conductor over time. SDG&E stated that its estimate of the effectiveness of covered conductor installations decreased from 78 percent in year 1 to 65 percent in year 10.[113]

SDG&E explained that it used updated covered conductor effectiveness values to study the combined effectiveness of covered conductor with the advanced protection initiatives of FCP and EFD. SDG&E clarified that due to the lack of recorded data for these new installations,

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[109] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 88 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[110] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 89 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[111] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 89 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[112] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 89 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[113] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 90 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

subject matter expertise was used to estimate their effectiveness. SDG&E stated that it estimates the combined effectiveness of covered conductor with FCP and EFD at 77 percent, with additional costs of approximately $198,000 per mile.[114]

Energy Safety Evaluation

Energy Safety finds that cross-collaboration among IOUs has provided improvements for transparency and increased consistency in approaches when it comes to grid design and system hardening. However, many of these workstreams must continue, given ongoing developments and the importance of sharing knowledge as various utilities continue implementing mitigations, observing actual in-field effectiveness, and observing potential alternatives and new technologies to deploy. For instance, through the 2023 working group meetings, IOUs learned more about various potential covered conductor failure modes and associated needs to modify maintenance as a result,[115] needing alignment on determining the estimated effectiveness for covered conductor,[116] and developing an undergrounding working group.[117]

The IOUs must continue these efforts and reporting on lessons learned to further explore various mitigation approaches. While the IOUs collaborated on each of the various required areas from 2023, Energy Safety has modified the area for continued improvement to provide additional guidance for SDG&E. SDG&E must respond to this revised area for continued improvement in its 2026-2028 Base WMP given the dynamic nature of the topics and continued research.

Section 11 provides all areas for continued improvement for SDG&E, including the specific required progress that SDG&E must address in its 2026-2028 Base WMP.

SDGE-23B-09. New Technologies Evaluation and REFCL Implementation

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety required SDG&E to provide an update on its progress evaluating the use of rapid earth fault current limiter (REFCL) as a

[114] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), pp. 91-92 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[115] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 89 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[116] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 89 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[117] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 90 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

mitigation or provide an explanation why SDG&E finds REFCL not logical and/or feasible to use as a mitigation. [118]

In its 2025 WMP Update, SDG&E clarified that a study was performed in 2020 and 2021 on existing substation and distribution circuit infrastructure to identify and quantify system changes required to deploy a REFCL system.[119] The study concluded that deploying a REFCL system would necessitate substantial rebuilds due to a significant amount of phase-to-neutral connected customer loads and equipment, which are not rated to operate on a REFCL system.[120] SDG&E stated that to protect an entire circuit with REFCL, all equipment neutral/ground references must be removed and replaced with phase-to-phase/delta connected equipment.[121] Additionally, SDG&E stated that all equipment must be rated above the 12 kV nominal voltage to prevent failures caused by higher stresses from a REFCL system.[122]

SDG&E stated that the estimated cost to implement a REFCL system on one substation feeding three distribution circuits is approximately $26 million, with costs scaling higher for substations with more distribution transformers.[123] SDG&E stated that with about 70 substations and 285 distribution circuits in the CPUC's HFTD, the required infrastructure rebuild would be cost-prohibitive and would only mitigate single phase-to-ground faults.[124] SDG&E stated that the REFCL systems do not mitigate faults involving multiple phases, which are common on the electric distribution system.[125]

In addition, SDG&E stated that it prefers other technologies developed over the past decade, such as sensitive ground fault (SGF) Detection, sensitive relay profile (SRP) settings, and

[118] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 85 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[119] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 94 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[120] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 94 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

[121] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 94 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

[122] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 94 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

[123] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 94 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[124] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 94 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[125] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 94 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

falling conductor protection (FCP) (WMP.463), [126] as it believes they provide a diverse and layered approach to covering all fault scenarios. SDG&E also stated that these technologies, combined with strategic undergrounding (WMP.473), covered conductor installation (WMP.455), and the use of advanced meteorology and fire science data, sufficiently mitigate wildfire risks without implementing REFCL.[127]

Lastly, SDG&E reported that it continues to explore emerging technologies, including REFCL systems, to enhance ignition and wildfire risk mitigation. [128]

Energy Safety Evaluation

SDG&E provided sufficient information regarding its consideration of REFCL and the specifics of its electric system to demonstrate why it is not continuing to pursue REFCL, instead focusing on other technologies that provide similar risk reduction benefits.

SDG&E sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in SDG&E's 2026-2028 Base WMP.

SDGE-23B-10. Early Fault Detection Implementation

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety required SDG&E to analyze the effectiveness of combining early fault detection (EFD) technology with other hardening efforts like covered conductor and traditional hardening to maximize risk reduction.[129] Energy Safety also required SDG&E to document the performance of deployed EFD in identifying incipient faults, including the number and accuracy of potential incipient faults detected. Lastly, Energy Safety required SDG&E to document any instances where EFD sensors successfully prevented or mitigated potential ignitions and provide additional details on maintenance requirements related to EFD.

In its 2025 WMP Update, SDG&E stated that, to date, six possible incipient faults have been identified through the use of radio frequency EFD sensors, with a location accuracy of 30

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[126] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 94 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[127] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 94 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

[128] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 94 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[129] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), pp. 85-86 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

feet.[130, 131] SDG&E stated that, in addition, 12 possible incipient faults have been detected using Power Quality data[132] based EFD technology, with a location accuracy in the hundreds of feet.[133] SDG&E stated that radio frequency EFD sensors detected six instances of severe wood crossarm tracking, degradation, and insulator damage on structures in the HFTD.[134] SDG&E stated that because these issues were detected early and addressed, any potential ignition risk from the failing equipment was mitigated.[135]

SDG&E stated that maintenance of EFD sensors is primarily routine in nature and follows a similar procedure and timeline as other line-side devices installed on circuits.[136] SDG&E stated that this includes, but is not limited to, periodic backup battery testing and replacement, periodic remote firmware/software updates as required, replacement of failed sensor nodes, and other non-routine maintenance as required.[137]

Energy Safety Evaluation

While SDG&E provided adequate detail on the progress of its EFD sensors, SDG&E misinterpreted the intent on reporting on the accuracy for identifying incipient faults. As part of its evaluation for the success of EFD, SDG&E must provide analysis on the accuracy in terms of the number of incipient faults correctly identified, the number of false positives identified, and the number of potential incipient faults missed by EFD technology through radio frequency and Power Quality data. Additionally, SDG&E must report on the progress it has

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[130] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 95 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[131] In its response to SDGE-23-10, SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024) p. 95, SDG&E directed readers to find an analysis of the use of EFD in combination with other hardening efforts in Section 5.8 "SDGE-23-08: Continuation of Grid Hardening Joint Studies," pp. 85-86 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[132] Power Quality (PQ) pertains to the PQ Meter deployment portion of the project, which includes monitoring the health of root-mean-square (RMS) voltage, voltage and current transient events, system harmonics (including spectra), real and reactive power flow, power factor, and flicker; as described further in SDG&E 2023-2025 Base WMP (R5, redacted) (clean version, July 5, 2024) pp. 173-174 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56957&shareable=true, accessed July 15, 2024).

[133] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 95 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[134] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 95 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

[135] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 95 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

[136] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 95 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

[137] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 95 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

made determining how to move forward with deployment of EFD sensors, including any updates on the effectiveness for reducing ignition risk in combination with other mitigations.

Energy Safety has modified the area for continued improvement to provide additional guidance for SDG&E. SDG&E must respond to this revised area for continued improvement in its 2026-2028 Base WMP.

This must be covered as part of the area for continued improvement "Continuation of Grid Hardening Joint Studies," as well as continued reporting on SDG&E's progress toward piloting and implementing EFD.

Section 11 provides all areas for continued improvement for SDG&E, including the specific required progress that SDG&E must address in its 2026-2028 Base WMP.

SDGE-23B-11. Changes to Scope of Falling Conductor Protection Program

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety required SDG&E to address the descoping of falling conductor protection (FCP) projects in favor of strategic undergrounding in its 2025 WMP Update.[138] Energy Safety required SDG&E to provide a list of descoped projects, detailing circuit segment name/ID, length, and associated risk score. Energy Safety also required SDG&E to demonstrate considerations for cost/benefit analysis, deployment time, interim mitigation needs, and mitigation effectiveness, particularly FCP in combination with covered conductor installations. Energy Safety also required SDG&E to report any adjustments to FCP targets stemming from this analysis.

In its 2025 WMP Update, SDG&E provided a table that lists FCP projects that were descoped and are targeted for strategic undergrounding of electric lines (WMP.473).[139] SDG&E described its decision-making process used for mitigation selection, including the other considerations for circuit segments, such as cost/benefit analysis, deployment time, interim mitigation needs, and mitigation effectiveness for reducing ignition risk, in the section reporting its progress on area for continued improvement SDGE-23B-06.[140]

SDG&E clarified that its scoping for FCP will not change based on the joint IOU combined efficacy study results.[141] It also stated that the current method for scoping work includes analysis based on SDG&E's strategy and cost consideration in selecting circuits for strategic

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[138] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 86 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[139] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 17 "Descoped FCP Projects," pp. 96-98 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[140] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Section 5.6 "SDGE 23-06: Demonstration of Proper Decision Making for Selection of Undergrounding Projects," pp. 53-65 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[141] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 98 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

undergrounding of electric lines and covered conductor installation. SDG&E explained that this method aims to provide protection on circuits where there is no other mitigation before implementing the combined mitigation of FCP with covered conductor installation.[142] SDG&E stated that this approach is done to gain immediate risk reduction on circuits expected to remain as overhead bare conductor before applying additional mitigation measures on circuits that have already had risk reduction associated with covered conductor installation.[143]

Energy Safety Evaluation

SDG&E provided sufficient information regarding the projects that were descoped and transitioned into strategic undergrounding, which follows SDG&E's described decision-making process and shows evaluation for effectiveness for switching the projects.

SDG&E sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in SDG&E's 2026-2028 Base WMP.

8.1.1.2 New or Discontinued Programs

In its 2025 WMP Update, SDG&E did not report any new or discontinued programs related to the grid design and system hardening section of its 2023-2025 Base WMP.

8.1.1.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, SDG&E reported updates to the approved targets, objectives, and projected expenditures related to the grid design and system hardening section of its 2023-2025 Base WMP. Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.

SDG&E reported updates to its targets for the following initiatives: Standby Power Programs (WMP.468), Strategic Undergrounding (WMP.473), Distribution Overhead System Hardening (WMP.475), Transmission Overhead Hardening (WMP.543), Transmission Overhead Hardening – Distribution Underbuild (WMP.545), and Distribution Communications Reliability Improvements (WMP.549).[144]

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[142] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 98 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

[143] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 98 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

[144] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," pp. 20-21 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

SDG&E reported updates to its projected expenditures for the following initiatives: Covered Conductor (WMP.455), Microgrids (WMP.462), Generator Grant Programs (WMP.466), Generator Assistance Programs (WMP.467), and Early Fault Detection (WMP.1195).[145]

Standby Power Programs (WMP.468)

SDG&E provided a significant decrease to its target for standby power programs from 300 to 89 generators.[146] SDG&E explained that the decrease is due to SDG&E expecting to meet its intended goal for these programs in 2024, building on these efforts in 2025 to "explore and evaluate additional mitigation approaches," including renewable backup power options.[147]

Strategic Undergrounding (WMP.473)

SDG&E provided a decrease to its target for strategic undergrounding from 150 to 125 miles.[148] SDG&E stated this target reduction aligns with the Settlement Agreement with the California Public Advocates Office that it submitted in its 2024 Test Year General Rate Case (GRC) proceeding for the CPUC's consideration.[149]

SDG&E provided a decrease to its projected O&M expenditures for strategic undergrounding due to adjustments made to align 2025 projected expenditures with historical spend data.[150]

Distribution Overhead System Hardening (WMP.475)

SDG&E provided a decrease to its target for distribution overhead traditional hardening from 0.6 to 0 miles.[151] SDG&E stated that the distribution overhead system hardening work will be

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[145] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 21 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[146] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[147] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 26 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[148] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[149] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 26 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[150] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 26 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[151] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

completed by the end of 2024, and no additional work is planned due to the transition to the covered conductor initiative.[152]

Transmission Overhead Hardening (WMP.543)

SDG&E provided a decrease to its target for transmission overhead hardening from 10.2 to 4.64 miles.[153] SDG&E stated this target reduction is due to an expected shift in work to 2024, with the overall forecasted mileage for the 2023-2025 Base WMP cycle remaining unchanged.[154]

Transmission Overhead Hardening – Distribution Underbuild (WMP.545)

SDG&E provided a decrease to its target for transmission overhead hardening – distribution underbuild from 3.4 to 1.8 miles.[155] SDG&E stated this target reduction is due to some work shifting from 2025 to 2024, with additional projects beginning in 2025 to be completed in the 2026-2028 Base WMP cycle.[156]

Distribution Communications Reliability Improvements (WMP.549)

SDG&E provided a decrease to its target for distribution communications reliability improvements from 90 to 42 stations.[157] SDG&E stated that the delay in improvements is due to the challenges presented by transmission structure attachments and a new distribution pole design using engineered mono-poles with communication equipment above the electric distribution wire.[158] SDG&E stated it expects construction of three pilot sites and

[152] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 27 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[153] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[154] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 30 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[155] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[156] SDG&E 2025 WMP Update (R2) (clean version, July5, 2024), pp. 30-31 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[157] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 21 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[158] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 17 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

standardization of pole designs to be completed in 2024 with improvements accelerating in 2025.[159]

Covered Conductor (WMP.455)

SDG&E provided an increase to its projected capital expenditures for covered conductor from $48,246,000 to $67,632,000 and increased its projected O&M expenditures from $592,000 to $3,090,000.[160] SDG&E explained that this is due to shifting work from 2024 to 2025. The total forecasted mileage for the remainder of the 2023-2025 Base WMP cycle remains unchanged.

Microgrids (WMP.462)

SDG&E provided an increase to its projected capital expenditures for microgrids from $0 to $14,127,000.[161] SDG&E explained that this is due to shifting work from 2024 to 2025.[162] The total forecasted targets for microgrids for the remainder of the 2023-2025 Base WMP cycle remains unchanged.

Generator Grant Programs (WMP.466)

SDG&E provided a decreased to its projected O&M expenditures for generator grant programs from $7,550,000 to $3,233,000.[163] SDG&E stated that as this initiative matures and the most at-risk qualifying customers receive the benefits, the remaining pool of eligible customers decreases annually. Additionally, a recent decrease in PSPS events may have reduced perceived resiliency needs among qualifying customers. SDG&E provided a reduction in its 2025 projected O&M expenditures to align the initiative with updated resiliency needs of qualifying customers based on updated PSPS de-energization trends.[164]

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[159] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 31 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[160] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 21 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[161] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[162] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 24 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

[163] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[164] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

Generator Assistance Programs (WMP.467)

SDG&E provided a decrease to its projected O&M expenditures for generator assistance programs from $1,828,000 to $501,000. [165] SDG&E stated that it developed this initiative based on the expectation that customers would participate in the programs in anticipation of a PSPS de-energization due to high winds, wildfire risk, or other weather emergencies.[166] SDG&E reported that when the perceived or actual likelihood of a PSPS de-energization is reduced, customer participation decreases.[167] SDG&E therefore decreased its 2025 projected O&M expenditures for this initiative to align with updated resiliency needs of qualifying customers based on updated PSPS de-energization trends. [168]

Early Fault Detection (WMP.1195)

SDG&E provided a decrease to its early fault detection projected O&M expenditures from $67,000 to $4,000.[169] SDG&E stated that its 2025 projected O&M expenditures decreased because fewer EFD nodes have been installed in the field, resulting in lower maintenance costs. [170]

Energy Safety Evaluation

For covered conductor, the projected expenditures correlated with the initial 2025 WMP Update, prior to resubmission per the errata, which increased the target from 40 to 60 miles to account for delays in 2024.[171] After Energy Safety rejected SDG&E's change order request,[172] SDG&E revised its 2025 WMP Update to its original target of 40 miles without reducing its associated projected expenditure changes. However, SDG&E still provided a reportable

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[165] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[166] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

[167] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 29, 2024).

[168] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[169] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[170] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 34 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[171] SDG&E 2025 WMP Update (R2) (redline, July 5, 2024), p 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56956&shareable=true, accessed July 19, 2024).

[172] Energy Safety Decision on SDG&E Change Order Request, p. 3 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56751&shareable=true, accessed July 19, 2024).

update to its projected expenditures as it still expects the covered conductor program to be off track in 2024.[173]

For distribution overhead system hardening, SDG&E provided an increase to its initial projected O&M expenditure by 1,906 percent.[174] SDG&E clarified that these increases are "based on recent historical actual costs" and due to "most of the projects forecasted in 2025 being True-up remediation type project."[175] Additionally, for covered conductor, projected O&M expenditures are similarly due to "post construction True-up analysis and remediation work."[176] SDG&E stated that these increases in projected expenditures have "a minimal impact on risk-spend efficiency calculation" and that the "impact on mitigation selection is negligible."[177]

For microgrids, projected capital expenditures correlated with the initial 2025 WMP Update, prior to resubmission per the errata, which increased the target from zero to two microgrid installations to account for delays in 2024.[178] After Energy Safety rejected SDG&E's change order request,[179] SDG&E revised its 2025 WMP Update to its original target of zero microgrids without reducing its associated projected expenditure changes. However, SDG&E still anticipates shifting work into 2025 and made corresponding changes to the projected expenditures.[180]

Regarding SDG&E's changes to its Generator Grant Programs and Generator Assistance Programs, Energy Safety agrees with SDG&E's assessment that the most at-risk qualifying customers have likely received the benefits of these programs and the pool of eligible customers has decreased as the programs have progressed.[181] Energy Safety finds SDG&E's

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[173] Data Request OEIS-P-WMP-2024-SDGE-008, Question 1 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57084&shareable=true, accessed July 29, 2024).

[174] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[175] Data Request OEIS-P-WMP_2024-SDGE-002, Question 6 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56556&shareable=true, accessed July 22, 2024).

[176] Data Request OEIS-P-WMP_2024-SDGE-003, Question 3 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56577&shareable=true, accessed July 22, 2024).

[177] Data Request OEIS-P-WMP-2024-SDGE-003, Question 3 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56577&shareable=true, accessed July 22, 2024).

[178] SDG&E 2025 WMP Update (R2) (redline, July 5, 2024), p 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56956&shareable=true, accessed July 19, 2024).

[179] Energy Safety Decision on SDG&E Change Order Request, p. 6 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56751&shareable=true, accessed July 19, 2024).

[180] Data Request OEIS-P-WMP-2024-SDGE-008, Question 2 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57084&shareable=true, accessed July 29, 2024).

[181] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

explanation that the recent decrease in PSPS event frequency has resulted in reduced perceived resiliency needs among qualifying customers justifies the plan update.[182]

Areas for Continued Improvement

SDG&E must continue to improve in the following area and report its progress in its 2026-2028 Base WMP. Additionally, in its 2026-2028 Base WMP, SDG&E must report its progress on any existing areas for continued improvement specified in Energy Safety's Decision on SDG&E's 2023-2025 Base WMP.[183]

In its 2025 WMP Update, SDG&E reported a decrease to its 2025 target for its Distribution Communications Reliability Improvements initiative from 90 to 42 base stations, citing technical and workflow process constraints[184] and delays in the development of pole specifications.[185] These improvements are necessary for a variety of technologies to perform properly in remote areas, such as falling conductor protection and early fault detection. SDG&E must continue to show that it is prioritizing these improvements by reporting on its progress, including how it plans to accelerate targets in 2026-2028 to ensure proper coverage in remote areas.

Section 11 provides all areas for continued improvement for SDG&E, including the specific required progress that SDG&E must address in its 2026-2028 Base WMP.

8.1.2 Asset Inspections

8.1.2.1 2023 Areas for Continued Improvement

As required by Energy Safety's Decision on SDG&E's 2023-2025 Base WMP,[186] SDG&E reported its progress on two areas for continued improvement in the asset inspections section in its 2025 WMP Update.

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[182] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[183] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), pp. 84-88 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[184] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 17 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[185] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 31 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[186] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), pp. 86-87 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

SDGE-23B-12. Covered Conductor Inspection and Maintenance

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety required SDG&E to discuss how its inspection programs will address failure modes unique to covered conductor such as water intrusion, splice covers, and surface damage.[187]

In its 2025 WMP Update, SDG&E stated that in 2024 it will add new condition codes to its Systems Applications and Processes (SAP) Corrective Maintenance Program related to the health of covered conductor.[188] It will also update both the initial and annual training curriculum to include covered conductor surface damage such as bulging and cracking, water intrusion such as corrosion, damage to splice covers, and issues at connection ends.[189] In addition, SDG&E stated it will perform a small number of infrared inspections on covered conductor to gauge the effectiveness of thermography as an inspection method.[190]

Energy Safety Evaluation

Energy Safety finds that SDG&E's commitment to adding condition codes specific to covered conductor and updating its training curriculum to include failure modes specific to covered conductor will increase the likelihood of inspections identifying such conditions for remediation.

SDG&E sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in SDG&E's 2026-2028 Base WMP.

SDGE-23B-13. QA/QC for Inspections

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety required SDG&E to provide information related to its quality assurance and quality control (QA/QC) program.[191] Energy Safety required SDG&E to describe how drone inspections adequately cover the QA/QC of detailed inspections, describe how its QA/QC program incorporates desktop and field review, discuss its drone inspection validation process, discuss how QA/QC findings drive changes to inspection programs, and provide a data analysis of QA/QC audits from 2021-2023 including the find rate and total findings.

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[187] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 86 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[188] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 99 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[189] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 99 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[190] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 99 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[191] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 87 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

In its 2025 WMP Update, SDG&E clarified that drone inspections replaced an inspection program that was named "QA/QC inspections," and that drone inspections are not used for the QA/QC of detailed inspections.[192] SDG&E stated that drone inspections are validated through the quality control methods discussed in its 2023-2025 Base WMP (machine learning model review and Construction Supervisor review).[193] SDG&E stated that it did not track QA/QC pass/fail rates from 2021-2023 because it is unable to determine if conditions found during the audit were present at the time of inspection.[194]

SDG&E stated that it will improve its QA/QC program by assessing 50 percent of issues identified during inspections within one month. SDG&E also commits to auditing five percent of inspections within one month of the completed inspection, tracking the pass/fail results, and monitoring the trends to drive training improvements.[195]

Energy Safety Evaluation

SDG&E's commitment to auditing five percent of inspections within one month of the completed inspection is an improvement over its previous practice of evaluating a smaller percentage of inspections within a three-month timeframe. Similarly, SDG&E's commitment to tracking the pass/fail rates and leveraging trends to drive training improvements will increase the effectiveness of its QA/QC and asset inspection programs. While these improvements may address Energy Safety's concerns about properly finding, addressing, and tracking issues discovered during the QA/QC processes, SDG&E must provide the pass/fail rates after the implementation of the new inspection audit regime. SDG&E must also provide additional information about the pass/fail criteria, how it will track pass/fail data, and the process by which SDG&E will use QA/QC findings to drive training improvements and/or inspection changes.

Energy Safety has modified the area for continued improvement to provide additional guidance for SDG&E. SDG&E must respond to this revised area for continued improvement in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for SDG&E, including the specific required progress that SDG&E must address in its 2026-2028 Base WMP.

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[192] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 100 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[193] SDG&E 2023-2025 Base WMP (R5, redacted) (clean version, July 5, 2024), Section 8.1.3.7 "Drone Assessments (WMP.552)," pp. 202-203; Section 8.1.6.3 "QA/QC of Distribution Drone Assessments (WMP .1192)," p. 235 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56957&shareable=true, accessed July 15, 2024).

[194] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 100 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[195] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 100 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

8.1.2.2 New or Discontinued Programs

In its 2025 WMP Update, SDG&E did not report any new or discontinued programs related to the asset inspection section of its 2023-2025 Base WMP.

8.1.2.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, SDG&E reported quarterly targets (end of Q2 and end of Q3) for its 11 2025 asset inspection programs, as required by the 2025 WMP Update Guidelines.[196]

Additionally, SDG&E provided reportable updates to the approved targets and projected expenditures related to the asset inspection section of its 2023-2025 Base WMP. Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.

Specifically, SDG&E provided updates to its targets and projected expenditures for the following initiatives: Transmission Overhead Detailed Inspections (WMP.479), Distribution Infrared Inspections (WMP.481), Transmission Infrared Inspections (WMP.482), Distribution Wood Pole Intrusive Inspections (WMP.483), Transmission Overhead Patrol Inspections (WMP.489), Transmission Wood Pole Intrusive Inspections (WMP.1190), Distribution Overhead Detailed Inspections (WMP.478), and Drone Assessments (WMP.552).

SDG&E provided increases to its targets for transmission overhead detailed inspections from 1,979 to 2,479, for transmission infrared inspections from 6,179 to 7,331, for distribution wood pole intrusive inspections from 0 to 344, and for transmission overhead patrol inspections from 6,337 to 7,533.[197] SDG&E provided decreases to its targets for distribution infrared inspections from 9,532 to 300 and transmission wood pole intrusive inspections from 141 to 114.[198]

SDG&E stated that its justification for providing increases to its targets for transmission overhead detailed inspections, transmission infrared inspections, and transmission overhead patrol inspections is that it plans to include its existing wildland-urban interface (WUI)

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[196] 2025 WMP Update Guidelines, Section 3, "Quarterly Inspection Targets for 2025," p. 15 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid= 56254&shareable=true, accessed June 3, 2024).

[197] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20; and "Table 8: Asset Inspections and Vegetation Management Targets for 2025," p. 39 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[198] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 21; and "Table 8: Asset Inspections and Vegetation Management Targets for 2025," p. 39 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

inspection and repair work in its WMP.[199] SDG&E stated that distribution infrared inspections have demonstrated a low find rate, and it is adjusting the inspection program to focus on assets experiencing higher loads during peak season.[200] SDG&E stated that the target increase provided for distribution wood pole intrusive inspections is based on an assessment of updated data that revealed additional wood poles that are due for inspection in 2025.[201] SDG&E stated that the target reduction provided for wood pole intrusive inspections is the result of operational changes to its electric system such as the replacement of wood poles with steel structures, removal of poles from service, and intrusive inspections performed in 2022 or 2023.[202]

SDG&E provided an increase to its projected capital expenditures for transmission overhead detailed inspections from $406,000 to $1,943,000 and drone assessments from $20,670,000 to $54,937,000.[203] SDG&E provided a decrease to its projected capital expenditures for HFTD Tier 3 distribution pole inspections from $2,361,000 to $0.[204]

SDG&E provided an increased to its projected O&M expenditures for distribution overhead detailed inspections from $327,000 to $824,000 and drone assessments from $12,656,000 to $31,490,000.[205] SDG&E provided a decrease to its projected O&M expenditures for transmission overhead detailed inspections from $108,000 to $38,000, distribution infrared inspections from $175,000 to $10,000, and HFTD Tier 3 distribution pole inspections from $313,000 to $0.[206]

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[199] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), pp. 28-29 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[200] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 28 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[201] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 30 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[202] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 35 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[203] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20; and Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[204] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20; and Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[205] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[206] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

Energy Safety Evaluation

SDG&E's provided target changes for transmission overhead detailed inspections, transmission infrared inspections, and transmission overhead patrol inspections will potentially reduce wildfire risk by allowing Energy Safety to review SDG&E's compliance with WUI transmission inspection targets.

SDG&E's provided reduction in its target for distribution infrared inspections from 9,532 to 300 is a significant change.[207] SDG&E reported that it performed approximately 12,000 distribution infrared inspections per year from 2020-2023 and found one level 1, 36 level 2, and 15 level 3 conditions.[208] SDG&E expects its distribution detailed inspection program scope decrease will improve the efficiency of the program given the historically low find rate. Though the find rate of distribution infrared inspections is low, conditions identified by infrared inspections are not likely to be identified prior to failure by other types of inspections.[209] In its 2026-2028 Base WMP, Energy Safety will require SDG&E to report on the find rate, number of findings, and estimated percentage of infrared findings that would have been identified by other inspection initiatives prior to failure.

SDG&E provided an increase to its target for distribution wood pole intrusive inspections from 0 to 344[210] based on an assessment that revealed additional wood poles are due for inspection in 2025.[211] Inspecting the identified poles is likely to reduce wildfire risk.

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[207] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[208] Data Request OEIS-P-CO_2024-SDGE-001, Question 2 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56206&shareable=true, accessed June 3, 2024).

[209] Responses to data requests by both SCE and SDG&E indicate that findings from infrared inspections are difficult to identify through other kinds of inspections per Data Request OEIS-P-WMP_2024-SCE-005, Question 1 ("The percentage of conditions identified by infrared inspections that SCE would likely not have identified through overhead detailed, patrol, or intrusive pole inspections prior to failure is 100%"), and Data Request OEIS-P-WMP_2024-SDGE-006, Question 2 ("Conditions identified through transmission infrared inspections would likely not be found through detailed, patrol, or intrusive inspections because heat anomaly conditions are not visible to the inspector without thermographic equipment") (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56890&shareable=true; https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56883&shareable=true, both accessed June 17, 2024).

[210] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[211] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 30 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

SDG&E provided a decrease to its target for transmission wood pole intrusive inspections from 141 to 114[212] due to changes in its electric system such as the replacement of wood poles with steel structures, removal of poles from service, and intrusive inspections performed in 2022 or 2023.[213] This change is likely to improve the efficiency of the program, as intrusive pole inspections cannot be performed on steel poles and do not need to be performed on poles that have been removed from service. Performing a second intrusive pole inspection within three years is unlikely to mitigate additional risk.

Areas for Continued Improvement

SDG&E must continue to improve in the following area and report its progress in its 2026-2028 Base WMP. Additionally, in its 2026-2028 Base WMP, SDG&E must report its progress on any existing areas for continued improvement specified in Energy Safety's Decision on SDG&E's 2023-2025 Base WMP.[214]

In its 2025 WMP Update, SDG&E provided a reduction to its distribution infrared inspection target from 9,532 to 300, a 97 percent decrease.[215] SDG&E stated that its distribution infrared inspection program has historically yielded a low find rate, and attributes the low find rate to the low loading present in the rural, high fire risk circuits prioritized by the program for inspection.[216] SDG&E stated that in the future it will focus the program on areas in the wildland-urban interface (WUI) with higher loads during peak season (summer). Though the find rate is low, conditions identified by infrared inspections are not likely to be identified through other inspection initiatives.[217] SDG&E's future methodology may result in an

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[212] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 21 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[213] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 35 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[214] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[215] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[216] Data Request OEIS-P-CO_2024-SDGE-001, Question 2 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56206&shareable=true, accessed June 3, 2024).

[217] Responses to data requests by both SCE and SDG&E indicate that findings from infrared inspections are difficult to identify through other kinds of inspections per Data Request OEIS-P-WMP_2024-SCE-005, Question 1 ("The percentage of conditions identified by infrared inspections that SCE would likely not have identified through overhead detailed, patrol, or intrusive pole inspections prior to failure is 100%"), and Data Request OEIS-P-WMP-2024-SDGE-006, Question 2 ("Conditions identified through transmission infrared inspections

increased find rate, but the scale of the reduction could leave risky conditions unidentified. In its 2026-2028 Base WMP, SDG&E must provide an update on the find rate, number of findings, and percentage of findings it estimates would have been identified by other inspection initiatives prior to failure in 2025.

Section 11 provides all areas for continued improvement for SDG&E, including the specific required progress that SDG&E must address in its 2026-2028 Base WMP.

8.1.3 Equipment Maintenance and Repair

8.1.3.1 2023 Areas for Continued Improvement

As required by Energy Safety's Decision on SDG&E's 2023-2025 Base WMP,[218] SDG&E reported its progress on one area for continued improvement in the equipment maintenance and repair section in its 2025 WMP Update.

SDGE-23B-14. Equipment Maintenance and Repair Maturity Level

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety required SDG&E to either provide a plan to increase its maturity level for equipment maintenance and repair or explain why the current maturity level was adequate.[219] Energy Safety required SDG&E to provide a discussion using the performance history of individual equipment to establish maintenance frequencies, estimating service life reduction based on usage and environmental conditions, and including risk buy-down estimates when prioritizing asset maintenance.

In its 2025 WMP Update, SDG&E stated that performance history, usage, and environmental conditions are used to develop predictive asset health models, prescriptive failure rates, and asset management strategies.[220] It further stated that performance history, usage, and environmental conditions are not necessarily used to establish maintenance frequencies or estimate service life reductions; instead, these factors are used to inform supplemental risk-

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would likely not be found through detailed, patrol, or intrusive inspections because heat anomaly conditions are not visible to the inspector without thermographic equipment") (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56890&shareable=true; https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56883&shareable=true, both accessed June 17, 2024).

[218] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[219] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 87 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[220] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 101 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

based inspection and replacement initiatives.[221] SDG&E stated that its risk prioritization models, which are used to determine high risk assets for supplemental inspection, are also informed by performance history, usage, and environmental conditions.[222]

Energy Safety Evaluation

SDG&E's response demonstrates that while performance history, usage, and environmental conditions do not dictate maintenance frequencies, these factors do influence maintenance frequencies through supplemental inspections and replacement initiatives.

SDG&E sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in SDG&E's 2026-2028 Base WMP.

8.1.3.2 New or Discontinued Programs

In its 2025 WMP Update, SDG&E did not report any new or discontinued programs related to the equipment maintenance and repair section of its 2023-2025 Base WMP.

8.1.3.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, SDG&E reported updates to its approved targets, objectives, and projected expenditures related to the equipment maintenance and repair section of its 2023-2025 Base WMP. Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.

Specifically, SDG&E provided updates to the targets and projected expenditures for Expulsion Fuse Replacement (WMP.459) and Hot Line Clamps (WMP.464).[223]

SDG&E provided an increase to its target for expulsion fuse replacement from 0 to 700 and hotline clamps from 0 to 950.[224] SDG&E provided an increase to its projected capital expenditures for expulsion fuse replacement from $0 to $1,550,000 and for hot line clamps

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[221] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 101 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[222] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 101 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[223] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[224] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

from $0 to $1,702,000 as well as a decrease in projected O&M expenditures from $120,000 to $52,000.[225]

SDG&E stated that the increase it provided to its expulsion fuse replacement target results from an assessment of data extracted from the geographic information system, which identified approximately 1,000 fuses in the HFTD that have not been replaced with CAL FIRE-approved fuses.[226] SDG&E stated that the increase it provided to its hotline clamp replacement target is the result of fielding assessments performed alongside fielding assessments for its lightning arrestor removal and replacement initiative, aviation protection initiative, and expulsion fuse replacement initiative that identified many assets requiring hot-line clamp replacement.[227]

Energy Safety Evaluation

Replacing 700 nonexempt fuses with CAL FIRE-exempt counterparts and 950 hotline clamps in 2025 is likely to reduce wildfire risk. Energy Safety finds the reportable updates appropriate.

Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for SDG&E in Targets, Objectives, and Projected Expenditures. In its 2026-2028 Base WMP, SDG&E must report its progress on any existing areas for continued improvement specified in Energy Safety's Decision on SDG&E's 2023-2025 Base WMP.[228]

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[225] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[226] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 24 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[227] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 25 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[228] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

8.1.4 Grid Operations and Procedures

8.1.4.1 2023 Areas for Continued Improvement

As required by Energy Safety's Decision on SDG&E's 2023-2025 Base WMP,[229] SDG&E reported its progress on one area for continued improvement in the grid operations and procedures section in its 2025 WMP Update.

SDGE-23B-15. Evaluation of Sensitive Relay Profile in Highest Risk Areas

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety required SDG&E to discuss its sensitive relay profile (SRP) program and to show if the current SRP coverage includes SDG&E's highest risk areas.[230] Energy Safety required SDG&E to conduct an analysis to determine the existing coverage of SRP in the areas with the highest risks according to SDG&E's risk models. Energy Safety required SDG&E to provide updated installation targets based on this analysis. If SDG&E could not ensure SRP coverage of the highest risk areas, Energy Safety required it provide an analysis showing why this coverage is not needed.

In its 2025 WMP Update, SDG&E clarified that an analysis using geographic information system (GIS) data was performed to evaluate the coverage provided by SRP-enabled devices within the HFTD. The analysis compared the number of overhead circuit miles downstream of SRP-capable devices to the total overhead circuit miles within the HFTD. SDG&E stated that the results demonstrate SRP devices currently provide coverage for 99.3 percent of the overhead mileage within the HFTD.[231] This coverage includes all 157 circuits with at least one mile of overhead distribution within the HFTD. [232] SDG&E stated that there are no plans to install new SRP devices at this time, but the SRP coverage will continue to be evaluated as needed.

Energy Safety Evaluation

Given that SDG&E's response discussed its SRP program and demonstrated that its SRP coverage includes its highest risk areas, Energy Safety finds that SDG&E sufficiently

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[229] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[230] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 88 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[231] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 102 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[232] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 102 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

responded to this area for continued improvement; no further reporting is required on this area for continued improvement in SDG&E's 2026-2028 Base WMP.

8.1.4.2 New or Discontinued Programs

In its 2025 WMP Update, SDG&E did not report any new or discontinued programs related to the Grid Operations and Procedures section of its 2023-2025 Base WMP.

8.1.4.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, SDG&E did not report updates to the approved targets, objectives, or projected expenditures related to the grid operations and procedures section of its 2023-2025 Base WMP.

8.2 Vegetation Management and Inspections

In its 2025 WMP Update, SDG&E provided five updates related to the vegetation management and inspections section of its 2023-2025 Base WMP. The updates SDG&E provided related to this section included reporting progress on two areas for continued improvement, quarterly targets for two 2025 vegetation management inspection programs, and an update to projected expenditures for one initiative.

8.2.1 2023 Areas for Continued Improvement

As required by Energy Safety's Decision on SDG&E's 2023-2025 Base WMP,[233] SDG&E reported its progress on one area for continued improvement in the vegetation management and inspections section in its 2025 WMP Update. SDG&E additionally reported intermediate progress on another area for continued improvement in its 2025 WMP Update.

8.2.1.1 SDGE-23B-16. Updates on Identifying Additional, Proactive HFTD Inspections

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety required SDG&E to report on its development of additional, proactive inspections within the HFTD in its 2026-2028 Base WMP.[234]

In its 2025 WMP Update, SDG&E elected to report intermediate progress toward meeting this area for continued improvement. SDG&E reported that it: developed a LiDAR strike tree analytics dashboard to associate LiDAR-observed trees with inventory trees; developed new

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[233] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[234] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 88 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

data collection techniques and reporting associated with post-event equipment damage assessment inspections; and modified its vegetation management area (VMA) inspection schedule for off-cycle patrol using risk analysis.

Energy Safety Evaluation

Energy Safety appreciates SDG&E's elective interim reporting on this area for continued improvement. In accordance with the requirements of SDGE-23B-16, SDG&E must report its progress on this area for continued improvement in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for SDG&E, including the specific required progress that SDG&E must address in its 2026-2028 Base WMP.

8.2.1.2 SDGE-23B-17. Continuation of Effectiveness of Enhanced Clearances Joint Study

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety required that SDG&E and the other large IOUs continue efforts on the Effectiveness of Enhanced Clearances Joint Study, as established by the 2021 WMP Action Statements.[235, 236] SDG&E, along with PG&E and SCE, were required to report in their respective 2025 WMP Updates progress and outcomes of the third-party contractor's analysis and evaluation of the effectiveness of enhanced clearances.

SDG&E reported on the progress of the Effectiveness of Enhanced Clearances Joint Study by providing a list of the aligned variables related to vegetation risk events, a description of the chosen database type and architecture to warehouse the data, and a description of how the third-party contractor incorporated biotic and abiotic factors into its analysis, as required. [237] The large IOUs were also required to provide the third-party contractor's assessment of the effectiveness of enhanced clearances, but were not able to provide this assessment as part of the 2025 WMP Updates. SDG&E stated that it anticipated that the third-party contractor's data analysis would begin in March 2024 and that an assessment of the effectiveness of enhanced clearances had not been finalized.[238]

Energy Safety Evaluation

SDG&E sufficiently responded to the progress required for its 2025 WMP Update for this area for continued improvement. Given that the third party's assessment is currently in progress

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[235] Energy Safety Action Statement on SDG&E 2021 WMP Update (July 20, 2021), SDGE-21-04, p. 8 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=51674&shareable=true, accessed May 31, 2024).

[236] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), pp. 89-90 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[237] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), pp. 89-90 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[238] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 104 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

and has not been finalized, SDG&E must provide Energy Safety with the third party's assessment as soon as it is finalized.

In accordance with Energy Safety's Decision on SDG&E's 2023-2025 Base WMP,[239] SDG&E must report its progress on SDGE-23B-17 in its 2026-2028 Base WMP.

Section 11 provides all areas for continued improvement for SDG&E, including the specific required progress that SDG&E must address in its 2026-2028 Base WMP.

8.2.2 New or Discontinued Programs

In its 2025 WMP Update, SDG&E did not report any new or discontinued programs related to the vegetation management and inspections section of its 2023-2025 Base WMP.

8.2.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, SDG&E provided quarterly targets (end of Q2 and end of Q3) for its two 2025 vegetation management inspection programs, as required by the 2025 WMP Update Guidelines.[240]

Additionally, SDG&E reported an update to one projected expenditure related to the vegetation management and inspections section of its 2023-2025 Base WMP.

8.2.3.1 Energy Safety Evaluation

SDG&E's quarterly targets for its 2025 vegetation management inspections are consistent with quarterly targets for 2023 and 2024 and meet the requirements of the 2025 WMP Update Guidelines.

SDG&E appropriately reported a 30 percent increase in projected O&M expenditures for Detailed Vegetation Inspections (from $47,540,000 to $61,887,000) in accordance with the 2025 WMP Update Guidelines.[241] SDG&E cites contractor rate increases as the cause for this increase to projected expenditure.[242]

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[239] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[240] 2025 WMP Update Guidelines, Section 3 "Quarterly Inspection Targets for 2025," p. 15 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid= 56254&shareable=true, accessed June 5, 2024).

[241] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[242] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 35 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

8.2.3.2 Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for SDG&E in Targets, Objectives, and Projected Expenditures. In its 2026-2028 Base WMP, SDG&E must report its progress on any existing areas for continued improvement specified in Energy Safety's Decision on SDG&E's 2023-2025 Base WMP.[243]

8.3 Situational Awareness and Forecasting

In its 2025 WMP Update, SDG&E provided eight updates related to the situational awareness and forecasting section of its 2023-2025 Base WMP. The updates SDG&E provided related to this section included reporting required progress on two areas for continued improvement, reporting two new programs and to discontinue two programs, reporting one update to an approved target, and reporting updates to three projected expenditures.

8.3.1 2023 Areas for Continued Improvement

As required by Energy Safety's Decision on SDG&E's 2023-2025 Base WMP,[244] SDG&E reported its progress on two areas for continued improvement in the situational awareness and forecasting section in its 2025 WMP Update.

8.3.1.1 SDGE-23B-18. Update Targets Table with Planned Improvements' Measurable Targets

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety required that SDG&E include in its 2025 WMP Update a more comprehensive list of measurable targets in its table "Situational Awareness Initiative Targets by Year," including targets that SDG&E includes in its planned improvements section along with relevant timelines to track progress.[245]

In its 2025 WMP Update, SDG&E provided situational awareness and forecasting targets for the majority of its planned improvements pertaining to this topic area in its planned improvements section of its situational awareness and forecasting initiatives.[246] SDG&E explained that some planned improvements, though foundational to supporting established

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[243] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[244] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 90 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[245] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 90 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[246] SDG&E 2023-2025 Base WMP (R5, redacted) (clean version, July 5, 2024), pp. 308-310 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56957&shareable=true, accessed July 15, 2024).

wildfire initiatives, do not directly impact wildfire risk (e.g., environmental monitoring systems, weather forecasting) and as such SDG&E did not assign initiative targets to them.[247]

Energy Safety Evaluation

SDG&E provided a more comprehensive list of measurable targets, and in the instances where there were no targets, Energy Safety is satisfied by SDG&E's justification for not including some situational awareness targets.

SDG&E sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in SDG&E's 2026-2028 Base WMP.

8.3.1.2 SDGE-23B-19. Weather Station Maintenance and Calibration

In its Decision on SDG&E's 2023-2025 Base WMP, Energy Safety required that SDG&E continue to maintain and keep a log of all the annual maintenance and calibration for each weather station, including the station name, location, conducted maintenance, in compliance with SDG&E's weather station calibration training document, as well as document the annual replacement of the fuel sensors listed in the maintenance and calibration log.[248] Energy Safety required that the document also include the length of time from initiation of a repair ticket to completion and the corrective maintenance performed to bring the station back into functioning condition.

Specifically, Energy Safety required SDG&E to submit with its 2025 WMP Update, documentation indicating the number of weather stations that received their annual calibration, and the number of stations that were unable to undergo annual maintenance and/or calibration due to factors such as remote location, weather conditions, customer refusals, environmental concerns, and safety issues. This documentation was required to include:

- The station name and location.
- The reason for the inability to conduct maintenance and/or calibration.
- The length of time since the last maintenance and calibration.
- The number of attempted but incomplete maintenance or calibration events for these stations in each calendar year.

[247] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 109 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[248] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), pp. 90-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

In its 2025 WMP Update, SDG&E provided maintenance and calibration records of its 216 weather stations for 2023.[249] SDG&E also provided information on its two stations that could not be visited due to loss of access.[250] SDG&E indicated that access might be regained pending property owner agreement and/or road improvements and, if necessary, it will relocate its inaccessible stations. [251]

Energy Safety Evaluation

Energy Safety is satisfied by the information SDG&E provided about its 216 accessible weather stations and plans for addressing the challenge of performing maintenance and calibration on its two weather stations that are currently inaccessible.

SDG&E sufficiently responded to this area for continued improvement; no further reporting is required on this area for continued improvement in SDG&E's 2026-2028 Base WMP.

8.3.2 New or Discontinued Programs

In its 2025 WMP Update, SDG&E reported creating two new programs and discontinuing two existing programs related to the situational awareness and forecasting section of its 2023-2025 Base WMP. Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.

8.3.2.1 Weather Station Maintenance and Calibration (WMP.1430)

SDG&E reported that it is discontinuing its Weather Station Network and Normalized Difference Vegetation Index (NDVI) Cameras program (WMP.447) and evolving into a new program: Weather Station Maintenance and Calibration program (WMP.1430).[252] SDG&E stated that the old program, which focused on installation of weather stations,[253] is being discontinued due to weather station saturation in the service territory.[254] SDG&E stated that,

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[249] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Appendix B, "Weather Station Maintenance and Calibration" (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[250] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 20 "Weather Stations Unable to Undergo Annual Maintenance," p. 110 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[251] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 110 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[252] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 40 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[253] SDG&E 2023-2025 Base WMP (R5, redacted) (clean version, July 5, 2024), pp. 305-306 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56957&shareable=true, accessed July 15, 2024).

[254] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 35 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

in 2025, the new program will target maintenance and calibration of the 216 weather stations.[255]

8.3.2.2 Air Quality Station Maintenance (WMP.1431)

SDG&E reported that it is discontinuing its Air Quality Management Program (WMP.970) program and evolving into a new program: Air Quality Station Maintenance program (WMP.1431).[256] SDG&E stated that the old program, which focused on the installation of new particular sensors,[257] is being discontinued due to particulate sensor saturation in the service territory.[258] SDG&E stated that the new program will target maintenance and calibration of the 16 particulate sensors in 2025.[259]

8.3.2.3 Energy Safety Evaluation

SDG&E's Air Quality Management Program is in place for employee safety. By continuing to maintain and calibrate these devices, SDG&E is also continuing to ensure the health and well-being of its employees.[260, 261]

In response to a data request regarding SDG&E's NVDI camera systems related to its new program Weather Station Maintenance and Calibration (WMP.1430), SDG&E provided sufficient information about its use of NVDI camera systems.[262] SDG&E reported that it will be

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[255] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 40 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[256] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 40 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[257] SDG&E 2023-2025 Base WMP (R5, redacted) (clean version, July 5, 2024), pp. 306-307 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56957&shareable=true, accessed July 15, 2024).

[258] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 36 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[259] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 40 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[260] The Air Quality Management Program (WMP.970) was focused on installing particulate sensors. The new initiative replacing it, Air Quality Station Maintenance (WMP.1431), is focused on maintaining and upgrading sensors as necessary per SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 36 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[261] In response to a 2023 Energy Safety data request about SDG&E's Air Quality Management Program (WMP.970), SDG&E stated that the "goal of SDG&E's Air Quality Management Program is to protect employees from PM2.5 (particulate matter 2.5 microns or smaller in diameter) by quickly notifying employees when PM2.5 Air Quality Index thresholds are exceeded so they may take appropriate work precautions" per Data Request OEIS-P-WMP_2023-SDGE-005, Question 1 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=54193&shareable=true, accessed July 30, 2024).

[262] Data Request OEIS-P-WMP-2024-SDGE-01, Question 1 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56520&shareable=true, accessed June 4, 2024).

retaining the camera systems and noted that they are a critical component in the production of the Fire Potential Index (WMP.450).[263]

In response to SDG&E's reported new and discontinued programs, Energy Safety finds that the reported changes to these programs are consistent with the 2025 WMP Update Guidelines.

8.3.2.4 Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for SDG&E in New or Discontinued Programs.

8.3.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, SDG&E reported updates to one target and projected expenditures for four initiatives related to the situational awareness and forecasting section of its 2023-2025 Base WMP.[264] Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.

Specifically, SDG&E provided updates to its 2025 target for its Air Quality Management Program (WMP.970).[265] SDG&E provided updated projected expenditures associated with the target change for its Air Quality Management Program (WMP.970), and updates to three other initiatives: Weather Station Network and NDVI Cameras (WMP.447), Wireless Fault Indicators (WMP.449), and Fire Potential Index (FPI) (WMP.450).[266]

As noted in Section 8.3.2.2 above, SDG&E is shifting its Air Quality Management Program to its Air Quality Station Maintenance program. It is also shifting its Weather Station Network and NDVI Cameras to its Weather Station Maintenance and Calibration program. SDG&E's 2025 WMP Update provided updates to targets and projected expenditures using the original names for these programs.

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[263] Data Request OEIS-P-WMP-2024-SDGE-01, Question 1 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56520&shareable=true, accessed June 4, 2024).

[264] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 21; Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 21 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[265] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 21 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[266] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 21; Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 21 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

SDG&E provided a decrease to its target for its Air Quality Management Program from 6 to 0 sensors and projected O&M expenditures from $100,000 to $0.[267] SDG&E stated these decreases are due to the program being discontinued, a result of particulate sensor saturation in the service territory, as noted above in Section 8.3.2.2. [268] SDG&E stated that it will report on the program that is replacing it (maintenance and calibration activities on the 16 particulate sensors) via the QDR process beginning in 2025.[269]

SDG&E provided a decrease to its Weather Station Network and NDVI Cameras projected capital expenditures from $437,000 to $0.[270] SDG&E stated these decreases are due to the program being discontinued, a result of weather station sensor saturation in the service territory, as noted above in Section 8.3.2.1. [271] SDG&E stated that it will report on the program that is replacing it (maintenance and calibration activities on the 216 weather stations) via the QDR process beginning in 2025. [272]

SDG&E provided a decrease to its wireless fault indicators program projected capital expenditures from$299,000 to $0.[273] SDG&E stated that this decrease is due to SDG&E pausing this program, a result of manufacturer upgrades to the currently used wireless fault indicators. [274] SDG&E stated that it will use SCADA devices and existing wireless fault

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[267] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 21 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[268] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 36 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[269] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 40 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[270] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 21 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[271] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 35 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[272] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 40 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[273] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 21 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[274] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 23 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

indicators to provide situational awareness and guide first responders to the likely location of a fault. [275]

SDG&E provided a decrease to its Fire Potential Index (FPI) program projected capital expenditures from $2,783,000 to $1,477,000 and increase in O&M projected expenditures from $2,413,000 to $4,366,000.[276] SDG&E stated that its 2025 projected capital expenditures decreased because of a change in accounting treatment for the software data subscriptions, putting the cost under O&M: fire behavior modeling software can no longer be capitalized as the costs have almost completely transitioned to data subscriptions.[277]

8.3.3.1 Energy Safety Evaluation

Energy Safety finds SDG&E's provided changes are consistent with SDG&E's reported planned changes throughout its 2025 WMP Update.

8.3.3.2 Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for SDG&E in Targets, Objectives, and Projected Expenditures. In its 2026-2028 Base WMP, SDG&E must report its progress on any existing areas for continued improvement specified in Energy Safety's Decision on SDG&E's 2023-2025 Base WMP.[278]

8.4 Emergency Preparedness

In its 2025 WMP Update, SDG&E provided seven updates related to the emergency preparedness section of its 2023-2025 Base WMP. The updates SDG&E provided related to this section included updates to four objectives and three projected expenditures.

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[275] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 23 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[276] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 21 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[277] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 35 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[278] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

8.4.1 2023 Areas for Continued Improvement

Energy Safety's Decision on SDG&E's 2023-2025 Base WMP[279] did not require SDG&E to report progress on any areas for continued improvement in the emergency preparedness section in its 2025 WMP Update. Therefore, SDG&E has no reportable updates in this area.

8.4.2 New or Discontinued Programs

In its 2025 WMP Update, SDG&E did not report any new or discontinued programs related to the emergency preparedness section of its 2023-2025 Base WMP.

8.4.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, SDG&E reported updates to its approved objectives and projected expenditures related to the emergency preparedness section of its 2023-2025 Base WMP.[280] Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.

Specifically, SDG&E provided updates to four 3-year objectives, extending the completion dates for objectives concerning increasing emergency management staff (Objective 8.4.02) from June 2023 to June 2025; adding a Tactical Mobile Command Trailer to its emergency fleet (Objective 8.4.10) from September 2024 to June 2025; adding two Incident Support Vehicles to its emergency fleet (Objective 8.4.11) from December 2023 to December 2025; and creating a new repository for after action reviews (Objective 8.4.12) from December 2023 to December 2024. [281] SDG&E justifies these changes stating they are due to expected delays related to vendor and supply chain disruptions (Objectives 8.4.10 and 8.4.11) and the need to further or re-examine business strategies (Objective 8.4.02), staffing (Objective 8.4.12), and/or initiative needs (Objective 8.4.02). [282]

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[279] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[280] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 5 "Changes in Objective Completion Dates," p. 16; Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[281] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 5 "Changes in Objective Completion Dates," p. 16 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[282] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), pp. 17-18 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

SDG&E also provided updates to its projected expenditures for its Aviation Firefighting Program (WMP.557), Public Emergency Communication Strategy (WMP.563), and Emergency Preparedness Plan (WMP.1008).[283]

SDG&E provided an increase to its Aviation Firefighting Program projected capital expenditures from $0 to $689,000 and a decrease to its projected O&M expenditures from $11,539,000 to $8,366,000.[284] SDG&E stated that its 2025 projected capital expenditures for this initiative increased due to the need to purchase a spare engine for one of SDG&E's firefighting helicopters. SDG&E stated that its 2025 projected O&M expenditures decreased due to recent contract negotiations lowering overall program costs for this initiative.[285]

SDG&E provided an increased to its Public Emergency Communication Strategy program projected capital expenditures from $0 to $7,757,000. [286] SDG&E stated that its 2025 projected capital expenditures for this initiative increased due to an increase in scope of SDG&E's Public Safety Partner Portal.[287]

SDG&E provided a decrease to its Emergency Preparedness Plan projected capital expenditures from $1,729,000 to $315,000.[288] SDG&E stated that its 2025 projected expenditures for this initiative decreased because of the retirement of the "Noggin program"[289] and the consideration of other technological solutions.[290]

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[283] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[284] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[285] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), pp. 36-37 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[286] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[287] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 37 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[288] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[289] SDG&E's Noggin program used cloud-based forms for mapping and data collection from SDG&E's responders and included reporting and external data access components per Data Request OEIS-P-WMP-2024-SDGE-05, Question 1 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56798&shareable=true, accessed June 10, 2024).

[290] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 37 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

8.4.3.1 Energy Safety Evaluation

Energy Safety finds the changes to objective completion dates appropriate. SDG&E cites expected delays due to vendor and supply chain disruptions and the need to further or re-examine business strategies, staffing, and/or initiative needs. Energy Safety requested more information from SDG&E about its justifications for its objective completion date changes and finds SDG&E's responses sufficient.[291]

8.4.3.2 Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for SDG&E in Targets, Objectives, and Projected Expenditures.

8.5 Community Outreach and Engagement

In its 2025 WMP Update, SDG&E provided one update related to the community outreach and engagement section of its 2023-2025 Base WMP. The update SDG&E provided related to this section included an update to one projected expenditure.

8.5.1 2023 Areas for Continued Improvement

Energy Safety's Decision on SDG&E's 2023-2025 Base WMP[292] did not require SDG&E to report progress on any areas for continued improvement in the community outreach and engagement section in its 2025 WMP Update. Therefore, SDG&E has no reportable updates in this area.

8.5.2 New or Discontinued Programs

In its 2025 WMP Update, SDG&E did not report any new or discontinued programs related to the community outreach and engagement section of its 2023-2025 Base WMP.

8.5.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, SDG&E reported updates to its projected expenditures related to the community outreach and engagement section of its 2023-2025 Base WMP. Energy Safety finds that these reportable updates meet the requirements set forth in the 2025 WMP Update Guidelines.

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[291] Data Request OEIS-P-WMP_2024- SDGE-001, Questions 13-15 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56520&shareable=true, accessed May 30, 2024).

[292] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

Specifically, SDG&E provided a reduction to its Public Outreach and Education Awareness (WMP.527) program projected capital expenditures from $1,697,000 to $0.[293] SDG&E stated that its 2025 projected expenditures for this initiative decreased because the funds were reallocated to its Public Emergency Communication Strategy initiative (discussed in Section 8.4.3).[294]

8.5.3.1 Energy Safety Evaluation

Energy Safety finds the change to be appropriate.

8.5.3.2 Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for SDG&E in Targets, Objectives, and Projected Expenditures.

[293] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[294] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 37 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

9. Public Safety Power Shutoff

In its 2025 WMP Update, SDG&E provided four updates related to the Public Safety Power Shutoff section of its 2023-2025 Base WMP. The update SDG&E provided related to this section included an update to one objective, and updates to one approved target and the associated projected expenditures, and updates to the projected expenditures for two other initiatives. [295]

9.1 2023 Areas for Continued Improvement

Energy Safety's Decision on SDG&E's 2023-2025 Base WMP[296] did not require SDG&E to report progress on any areas for continued improvement in the Public Safety Power Shutoff section in its 2025 WMP Update. Therefore, SDG&E has no reportable updates in this area.

9.2 New or Discontinued Programs

In its 2025 WMP Update, SDG&E did not report any new or discontinued programs related to the Public Safety Power Shutoff section of its 2023-2025 Base WMP.

9.3 Targets, Objectives, and Projected Expenditures

In its 2025 WMP Update, SDG&E reported updates to one objective, one approved target and the associated projected expenditures, and its projected expenditures for two initiatives related to the Public Safety Power Shutoff section of its 2023-2025 Base WMP.[297]

Specifically, SDG&E provided an update to one 3-year objective, supplanting its Vegetation Risk Index (VRI) with a predictive model for the likelihood of vegetation related failures

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[295] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 5 "Changes in Objective Completion Dates," p. 16; Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20; "Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[296] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

[297] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 5 "Changes in Objective Completion Dates," p. 16; Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20; "Table 7 "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

(Objective 9.1.07), extending the completion date from December 2023 to December 2025.[298] SDG&E justifies this change stating it is adjusting the completion date in relation to SDG&E's assessment of the possibility of developing a unified predictive model combining the vegetation model used in WiNGS-Ops and a machine learning model created collaboratively with the University of California at San Diego that assesses the probability of vegetation-related outages given forecasted weather conditions.[299]

SDG&E also provided decrease to its 2025 target for its Standby Power Program (WMP.468) from 300 to 89 generators distributed and provided a decrease to the projected O&M expenditures associated with this initiative from $10,590,000 to $5,539,000.[300] The justification for this change is discussed in Section 8.1.1.3.

SDG&E further provided a decrease to projected expenditures for its Generator Grant Program (WMP.466), reducing projected O&M expenditures from $7,550,000 to $3,233,000, and for its Generator Assistance Program (WMP.467), reducing projected O&M expenditures from $1,828,000 to $501,000. [301] The justifications for these provided updates are also discussed in Section 8.1.1.3.

9.3.1 Energy Safety Evaluation

Energy Safety finds the adjustment SDG&E provided to the completion date of its objective to supplant its VRI with a predictive model from December 2023 to December 2025 to allow additional time to assess the modeling approach for vegetation failures acceptable.

See Energy Safety's evaluation of the updates SDG&E provided to its Standby Power Program and generator programs in Section 8.1.1.3.

9.3.2 Areas for Continued Improvement

Energy Safety has no new areas for continued improvement for SDG&E in Targets, Objectives, and Projected Expenditures.

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[298] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 5 "Changes in Objective Completion Dates," p. 16 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[299] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 18 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[300] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), Table 6 "Qualifying Changes in Targets and Expenditures (in Thousands)," p. 20 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[301] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), "Qualifying Changes in Expenditures only (in Thousands)," p. 22 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

10. SDG&E Process for Continuous Improvement

SDG&E did not indicate any changes to the lessons learned or corrective action program sections of its 2023-2025 Base WMP.

11. Required Areas for Continued Improvement

Energy Safety's WMP evaluations focus on each electrical corporations' strategies for reducing the risk of utility-related ignitions. The list below comprises all SDG&E's areas for continued improvement and the required progress that SDG&E must address in its 2026-2028 Base WMP. This includes areas for continued improvement from Energy Safety's Decision on SDG&E's 2023-2025 Base WMP[302] as well as new areas for continued improvement from Energy Safety's evaluation of SDG&E's 2025 WMP Update, as discussed in Sections 5 through 9 of this Decision.

11.1 Risk Methodology and Assessment

- **SDGE-25U-01. Calculating Risk Scores Using Maximum Consequence Values**
  - Description: In Energy Safety's decision on SDG&E's 2023-2025 WMP Base Plan, Energy Safety determined that SDG&E's use of maximum consequence values, as opposed to probability distributions, to aggregate risk scores was not aligned with fundamental mathematical standards and could lead to suboptimal mitigation prioritization decisions. SDG&E's progress on making this transition, as reported in its 2025 WMP Update, is adequate, but SDG&E must continue reporting on its further progress.
  - Required Progress: In its 2026-2028 Base WMP, SDG&E must continue to report on its progress transitioning to using probability distributions, as outlined in its 2025 WMP Update. This must include:
    - An overarching roadmap of its wildfire risk planning model updates, including where SDG&E is planning on trialing and implementing probability distributions.
    - Any changes to the transition plan.
      - The reasoning behind these changes.
    - Any updates on target implementation dates, including completed ones.
  - Discussed in Section 6 "Risk Methodology and Assessment."

[302] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80-91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

- **SDGE-23B-04. Incorporation of Extreme Weather Scenarios into Planning Models**
  - Description: In Energy Safety's decision on SDG&E's 2023-2025 WMP Base Plan, Energy Safety determined that SDG&E relied on wind conditions data representing the past 13 years that do not consider rare but foreseeable and significant risks. SDG&E does not evaluate the risk of extreme wind events in its service territory to prioritize its wildfire mitigations using WiNGS-Planning.
  - Required Progress: In its 2026-2028 Base WMP, SDG&E must report on its progress developing statistical estimates of potential wind events over at least the maximum asset life for its system and evaluate results from incorporating these into WiNGS-Planning when developing its mitigation initiative portfolio or explain why the approach would not serve as an improvement to its mitigation strategy.
  - Discussed in Section 6 "Risk Methodology and Assessment" of Energy Safety's Decision on SDG&E's 2023-2025 Base WMP.[303]

11.2 Wildfire Mitigation Strategy Development

- **SDGE-25U-02 Cross-Utility Collaboration on Best Practices for Inclusion of Climate Change Forecasts in Consequence Modeling, Inclusion of Community Vulnerability in Consequence Modeling, and Utility Vegetation Management for Wildfire Safety**
  - Description: SDG&E, PG&E, and SCE participated in past Energy Safety-sponsored scoping meetings on these topics and began collaborating on other WMP-related topics. SDG&E, PG&E, and SCE have not made sufficient efforts to include Bear Valley, Liberty Utilities, and PacifiCorp in these efforts.
  - Required Progress: In its 2026-2028 Base WMP, SDG&E must continue its collaboration efforts and demonstrate that it has made efforts to include Bear Valley, Liberty Utilities, and PacifiCorp in these efforts, where appropriate and relevant to each IOU's interests.

    SDG&E must also continue to participate in all Energy Safety Safety-organized activities related to best practices for:
    - Inclusion of climate change forecasts in consequence modeling.
    - Inclusion of community vulnerability in consequence modeling.
    - Utility vegetation management for wildfire safety.
  - Discussed in Section 7 "Wildfire Mitigation Strategy Development."

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[303] Decision on SDG&E 2023-2025 Wildfire Mitigation Plan (Oct. 13, 2023) pp. 26-27 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

- **SDGE-25U-03. Third-Party Recommendations for Model Improvements**
  - Description: In its 2025 WMP Update, SDG&E provided a plan to implement improvements identified for its risk modeling from its third-party consultant as required in Energy Safety's Decision on SDG&E's 2023-2025 Base WMP.[304] However, it deferred implementation of many recommendations to 2024 and 2025. Due to these deferrals, SDG&E must continue to report on status updates for its implementation of the consultant's recommendations in its 2026-2028 Base WMP.
  - Required Progress: In its 2026-2028 Base WMP, SDG&E must provide an update on its implementation of the following recommended improvements:
    - Inclusion of its Vegetation Risk Index and/or other measurement of vegetation-related risk and how this index informs vegetation management decisions.
    - Use of its risk model to inform mitigation work outside of grid hardening.
    - Sensitivity analysis for risk buy-down, mitigations, and PSPS models.
    - Elimination of double-counting of conductor age and circuit health index within models.
    - SDG&E must also provide a list of recommendations from the Table of Recommendations in its consultant's May 2023 report that it is adopting with the timeline for each recommendation's implementation and a list of recommendations it is not adopting, if any, with an explanation on why SDG&E is not adopting a recommendation.
  - Discussed in Section 7 "Wildfire Mitigation Strategy Development."

11.3 Grid Design, Operations, and Maintenance

- **SDGE-25U-04. Continuation of Grid Hardening Joint Studies**
  - Description: As directed in the 2023-2025 WMP Decisions, the IOUs have made progress on the areas for continued improvement (SDGE-22-11 and SDGE-22-13) relating to the continued joint IOU grid hardening working group efforts. Energy Safety expects the IOUs to continue these efforts and meet the requirements of this ongoing area for continued improvement.

[304] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), p. 83 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 31, 2024).

- Required Progress: In its 2026-2028 Base WMP, SDG&E must continue to collaborate with the other IOUs to evaluate various aspects of grid hardening and provide an updated Joint IOU Grid Hardening Working Group Report. This report must include continued analysis for the following:
  - The IOUs' joint evaluation of the effectiveness of undergrounding. This evaluation must account for any remaining risk from secondary or service lines, analysis of in-field observations from potential failure points of underground equipment, and ignition risk as well as PSPS risk.
  - The IOUs' joint evaluation of lessons learned on undergrounding applications. These lessons learned must include use of resources (including labor and materials) to accommodate undergrounding programs, any new technologies being applied to undergrounding, and cost and associated cost effectiveness efforts for deployment.
  - The IOUs' joint evaluation of various approaches to implementation of protective equipment and device settings. This evaluation must include an analysis of the effectiveness of various settings, lessons learned on how to minimize reliability impacts and safety impacts (including use of downed conductor detection and partial voltage detection devices), variations on settings used by IOUs including thresholds of enablement, and equipment types in which such settings are being adjusted.
  - The IOUs' continued efforts to evaluate new technologies being researched, piloted, and deployed by IOUs. These efforts must include, but not be limited to: REFCL, EFD, DFA, falling conductor protection, use of smart meter data, open phase detection, remote grids, and microgrids.
  - The IOUs' joint evaluation of the effectiveness of mitigations in combination with one another, including, but not limited to overhead system hardening, maintenance and replacement, and situational awareness mitigations. This must also include analysis of in-field observed effectiveness, as well as effectiveness for both wildfire and PSPS risk.
  - Additionally, SDG&E must report on all lessons learned SDG&E has applied or expects to apply to its WMP, including a list of applicable changes and a timeline for expected implementation as applicable.
- Discussed in 8.1.1 "Grid Design and System Hardening."

- **SDGE-25U-05. Early Fault Detection Implementation**
  - Description: As directed in its 2023-2025 WMP decision, SDG&E provided in its 2025 WMP Update an update on the status of its EFD deployment, including the number of incipient faults identified by EFD technology. However, SDG&E misinterpreted the accuracy of EFD technology, and plans to continue further development of EFD technology.
  - Required Progress: In its 2026-2028 Base WMP, SDG&E must analyze the accuracy of its EFD sensors in identifying issues and incipient faults. This must include evaluating the number of correctly identified issues, the number of false positives, and the number of missed issues.
    - As part of the ongoing collaboration efforts in SDGE-25B-08, "Continuation of Grid Hardening Joint Studies," SDG&E must report on its progress for implementing EFD technologies, including evaluation of effectiveness.
  - Discussed in Section 8.1.1 "Grid Design and System Hardening."

- **SDGE-25U-06. Distribution Communication Reliability Improvement**
  - Description: In its 2025 WMP Update, SDG&E provided a decrease to its 2025 target for its Distribution Communications Reliability Improvements initiative from 90 to 42 base stations, citing technical and workflow process constraints and delays in the development of pole specifications. This target reduction may reduce the effectiveness of some of SDG&E's mitigation technologies, such as falling conductor protection and early fault detection, which require reliable communication to effectively mitigate risk.
  - Required Progress: In its 2026-2028 Base WMP, SDG&E must:
    - Discuss the delays related to electrical engineering, civil engineering, work methods, telecommunications, and pole specification development.
    - Identify specific constraints in each area and outline its plan to address each constraint including any lessons learned.
  - Discussed in Section 8.1.1 "Grid Design and System Hardening."

- **SDGE-25U-07. Progress on Inspection QA/QC Program Change**
  - Description: In its 2025 WMP Update, SDG&E stated that it plans on modifying its QA/QC program to occur within one month (instead of within three months), track pass/fail audit results, and monitor trends and modify training accordingly. The planned improvements are in response to SDGE-23-13 and indicate significant changes in SDG&E's QA/QC process, and as such Energy

Safety must evaluate the improvements as part of SDG&E's 2026-2028 Base WMP.

- Required Progress: In its 2026-2028 Base WMP, SDG&E must provide the following:
  - Any modifications made to its QA/QC procedures to properly capture findings, including changes made to how SDG&E defines pass/fail criteria.
  - Descriptions of how SDG&E is tracking its pass/fail rates, including pass/fail rates for its QA/QC inspections in 2024.
  - Any observed trends from QA/QC audits performed in 2024, including a description of findings and associated modifications to procedures or trainings to address trends.
- Discussed in Section 8.1.2 "Asset Inspections."

- **SDGE-25U-08. Distribution Infrared Inspections**
  - Description: In its 2025 WMP Update, SDG&E provided a decreased to its 2025 target for its Distribution Infrared Inspections initiative from 9,532 to 300 structures, a decrease of 97 percent. SDG&E stated that it is modifying this program to focus on circuits with larger loads during peak season due to the low historical find rate of distribution infrared inspections. SDG&E did not commit to analyzing the find rate of the new inspection regime or reevaluating the distribution infrared inspection target on this basis.
  - Required Progress: In its 2026-2028 Base WMP, SDG&E must provide:
    - The find rate and number of findings of level 1, level 2 and level 3 conditions identified by the new inspection methodology.
    - The date of each infrared inspection resulting in a level 1 or 2 finding, and the date of the most recently completed detailed ground and aerial inspection prior to the infrared inspection for each infrared level 1 or 2 finding.
    - The percentage of level 1 and 2 infrared inspection findings SDG&E anticipates it likely would have identified by other inspection initiatives prior to failure.
      - Provide supporting documentation such as photographs and/or data analysis.
    - A discussion of any further changes to the initiative methodology or targets, including the basis for any changes.
  - Discussed in Section 8.1.2 "Asset Inspections."

11.4 Vegetation Management and Inspections

- **SDGE-23B-16. Updates on Identifying Additional, Proactive HFTD Inspections**
  - Description: In Energy Safety's decision on SDG&E's 2023-2025 WMP Base Plan, Energy Safety determined that SDG&E was developing additional, proactive inspections within the HFTD. As SDG&E's proactive HFTD inspections program matures, it will be necessary for SDG&E to provide sufficient information for Energy Safety to assess the quality of the program.
  - Required Progress: SDG&E must provide Energy Safety and WMP stakeholders updates on efforts to foster collaborative learning and improvement across the industry. In its 2026-2028 Base WMP, SDG&E must report on:
    - Any efforts to identify new opportunities for vegetation inspections or new inspection techniques.
    - The effectiveness of newly identified inspection opportunities.
    - Whether SDG&E plans to implement these inspections on a permanent basis and the justification if they are made permanent.[305]
  - Discussed in Section 8.2 "Vegetation Management and Inspections" of Energy Safety's Decision on SDG&E's 2023-2025 Base WMP.

- **SDGE-23B-17. Continuation of Effectiveness of Enhanced Clearances Joint Study**
  - Description: In Energy Safety's decision on SDG&E's 2023-2025 WMP Base Plan, Energy Safety determined that the large IOUs have jointly made progress addressing the Progression of Effectiveness of Enhanced Clearances Joint Study 2022 area for continued improvement (SDGE-22-20, PG&E-22-28, and SCE-22-18). Energy Safety expects the large IOUs and their contracted third party to continue their efforts and meet the requirements of this ongoing area for continued improvement.[306]

[305] These remedies are adapted from comments on SDG&E's 2023-2025 Base WMP from the Public Advocates Office at the California Public Utilities Commission (Cal Advocates) in "Comments of the Public Advocates Office on the 2023 to 2025 Wildfire Mitigation Plans of the Large Investor-Owned Utilities," dated May 26, 2023, p. 76 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53966&shareable=true, accessed June 5, 2024).

[306] For the definition of the objectives for the Enhanced Clearances Joint Study see Energy Safety Action Statement on SDG&E 2021 WMP Update (July 20, 2021) SDGE-21-04, pp. 8-9 and pp. 53-54 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=51674&shareable=true, accessed June 5, 2024).

- Required Progress:[307] With its 2026-2028 Base WMP, SDG&E, along with PG&E and SCE, must attach a white paper that discusses:
  - The large IOUs' joint evaluation of the effectiveness of enhanced clearances including, but not limited to, the effectiveness of enhanced clearances in reducing tree-caused outages and ignitions.
  - The large IOUs' joint recommendations for updates and changes to utility vegetation management operations and best management practices for wildfire safety based on this study. This may include the IOUs' recommendations for updates to regulations related to clearance distances.

  Furthermore, SDG&E must, as a result of this study and white paper:
  - Assess the effectiveness of enhanced clearances combined with other mitigations including, but not limited to, covered conductor and protective equipment and device settings (e.g., EPSS, FastCurve).
  - Provide a plan for implementing the results and recommendations of the third-party contractor analysis and the white paper. This plan must include trackable milestones and timelines for implementation. SDG&E must also provide a list of recommendations it is not implementing and why it is not selecting them for implementation.
- Discussed in Section 8.2 "Vegetation Management and Inspections."

- **SDGE-25U-09. Third-Party Contractor's Assessment of the Effectiveness of Enhanced Clearances**
  - Description: SDG&E and the other large IOUs did not provide their third-party contractor's assessment of the effectiveness of enhanced clearances as required by SDGE-23B-17 (formerly SDGE-23-17). SDG&E stated that an assessment of the effectiveness of enhanced clearances had not been finalized at the time of its 2025 WMP filing.[308]
  - Required Progress: No later than the submission of SDG&E's 2026-2028 Base WMP, SDG&E must provide[309] the third-party contractor's assessment of the

[307] In Energy Safety's Decision on SDG&E 2023-2025 Base WMP, SDGE-23-17 included requirements for progress reporting in SDG&E's 2025 WMP Update; this language has been removed from this Decision as it does not apply toward the required progress for the 2026-2028 Base WMP.

[308] SDG&E 2025 WMP Update (R2) (clean version, July 5, 2024), p. 104 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56955&shareable=true, accessed July 15, 2024).

[309] If the third-party contractor's assessment of the effectiveness of enhanced clearances is finalized before the submission of SDG&E's 2026-2028 Base WMP, email safetypolicy@energysafety.ca.gov for direction on submission including the appropriate Energy Safety docket.

effectiveness of enhanced clearances including, but not limited to, the effectiveness of enhanced clearances in reducing tree-caused outages and ignitions.

- Discussed in Section 8.2 “Vegetation Management and Inspections.”

12. Conclusion

SDG&E's 2025 WMP Update is approved.

Catastrophic wildfires remain a serious threat to the health and safety of Californians. Electrical corporations, including SDG&E, must continue to make progress toward reducing utility-related ignition risk.

Energy Safety expects SDG&E to effectively implement its wildfire mitigation activities to reduce the risk of utility-related ignitions and the potential catastrophic consequences if an ignition occurs, as well as to reduce the scale, scope, and frequency of PSPS events.

SDG&E must meet the commitments in its WMP and fully address the areas for continued improvement identified within this Decision to ensure it meaningfully reduces utility-related ignition and PSPS risk within its service territory over the plan cycle.

DATA DRIVEN FORWARD-THINKING INNOVATIVE SAFETY FOCUSED

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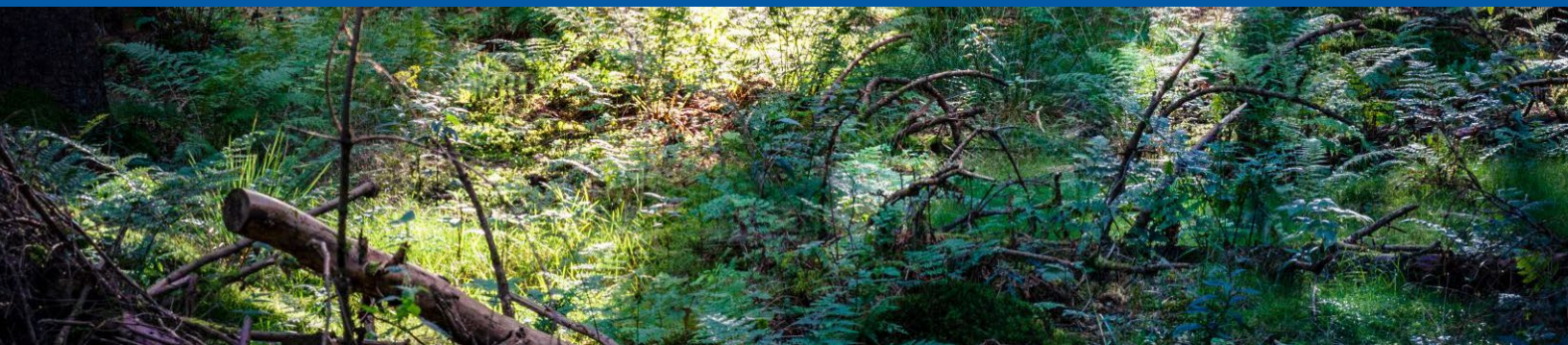
APPENDICES



APPENDICES

Appendix A. Glossary of Terms

Term	Definition
AFN	Access and functional needs
BVES	Bear Valley Electric Service
CAISO	California Independent System Operator
Cal Advocates	The Public Advocates Office at the California Public Utilities Commission
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Governor's Office of Emergency Services
CAP	Corrective action program
CBO	Community-based organization
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEJA	California Environmental Justice Alliance
CNRA	California Natural Resources Agency
CPUC	California Public Utilities Commission
D.	Prefix to a proceeding number designating a CPUC decision
DR	Data request
DWR	California Department of Water Resources
EBMUD	East Bay Municipal Utility District

Term	Definition
EFD	Early fault detection
EPUC	Energy Producers and Users Coalition
EVM	Enhanced vegetation management
FERC	Federal Energy Regulatory Commission
FPI	Fire potential index
FWI	Fire weather index
GFN	Ground-fault neutralizers
GIS	Geographic information systems
GO	General order
GPI	Green Power Institute
GRC	General rate case
HD	High definition
HFRA	High Fire Risk Area
HFTD	High fire threat district
HWT or Horizon West	Horizon West Transmission
I.	Prefix to a proceeding number designating a CPUC Order Instituting Investigation (OII)
ICS	Incident command system or structure
IOU	Investor-owned utility
IR	Infrared
ISA	International Society of Arboriculture
ITO	Independent transmission operator

Term	Definition
kV	Kilovolt
Liberty	Liberty Utilities
LiDAR	Light detection and ranging
Maturity Model	Electrical Corporation Wildfire Mitigation Maturity Model
Maturity Survey	Electrical Corporation Wildfire Mitigation Maturity Survey
MAVF	Multi-attribute value function
MBL	Medical Baseline
MGRA	Mussey Grade Road Alliance
ML	Machine learning
NDVI	Normalized difference vegetation index
NERC	North American Electric Reliability Corporation
NFDRS	National Fire Danger Rating System
NOD	Notice of defect
NOV	Notice of violation
OCM	Overhead circuit miles
OEIS or Energy Safety	Office of Energy Infrastructure Safety
PG&E	Pacific Gas and Electric Company
PoF	Probability of failure
PoI	Probability of ignition
PRC	Public Resources Code
PSPS	Public Safety Power Shutoff

Term	Definition
Pub. Util. Code or PU Code	Public Utilities Code
QA	Quality assurance
QC	Quality control
QDR	Quarterly Data Report
R.	Prefix to a proceeding number designating a CPUC rulemaking
RAMP	Risk Assessment and Mitigation Phase
RCRC	Rural County Representatives of California
REFCL	Rapid earth fault current limiter
RFW	Red Flag Warning
RSE	Risk-spend efficiency
SAWTI	Santa Ana Wildfire Threat Index
SCADA	Supervisory control and data acquisition
SCE	Southern California Edison Company
SDG&E	San Diego Gas & Electric Company
S-MAP	Safety Model Assessment Proceeding, now the Risk-Based Decision-Making Framework Proceeding
SMJU	Small and multijurisdictional utilities
TAT	Tree Assessment Tool
TBC	Trans Bay Cable
TURN	The Utility Reform Network
USFS	United States Forest Service
VM	Vegetation management

Term	Definition
VRI	Vegetation risk index
WMP	Wildfire Mitigation Plan
WRRM	Wildfire Risk Reduction Model
WSAB	Wildfire Safety Advisory Board
WUI	Wildland-urban interface

Appendix B. Status of 2023 Areas for Continued Improvement

Energy Safety's 2023 Decision[1] for SDG&E identified areas for continued improvement and associated required progress. Areas for continued improvement are where SDG&E must continue to improve its wildfire mitigation capabilities. As part of the 2025 WMP Update evaluation process, Energy Safety reviewed the progress reported by SDG&E on areas for continued improvement that Energy Safety required progress on by the 2025 WMP Update. Energy Safety is satisfied that SDG&E has made sufficient progress in all the identified areas for continued improvement.

SDG&E's 2023 areas for continued improvement that Energy Safety required progress on by the 2025 WMP Update are listed in Table A-1. The status column indicates whether each has been fully addressed. If not, the column notes where to find more information in this Decision.

[1] Energy Safety Decision on SDG&E 2023-2025 Base Wildfire Mitigation Plan (Oct. 13, 2023), Section 11 "Required Areas for Continued Improvement," pp. 80 - 91 (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true, accessed May 30, 2024)

Table A-1. SDG&E 2023 Areas for Continued Improvement

ID	Title	Status
SDGE-23B-01 (SDGE-23-01)	Cross-Utility Collaboration on Risk Model Development	SDG&E sufficiently addressed the required progress.
SDGE-23B-02 (SDGE-23-02)	Calculating Risk Scores Using Maximum Consequence Values	SDG&E did not sufficiently address the required progress. For related areas for continued improvement, see Sections 6.2.2 and 11 of this Decision.
SDGE-23B-03 (SDGE-23-03)	PSPS and Wildfire Risk Trade-Off Transparency	SDG&E sufficiently addressed the required progress.
SDGE-23B-05 (SDGE-23-05)	Cross-Utility Collaboration on Best Practices for Inclusion of Climate Change Forecasts in Consequence Modeling, Inclusion of Community Vulnerability in Consequence Modeling, and Utility Vegetation Management for Wildfire Safety	SDG&E did not sufficiently address the required progress. For related areas for continued improvement, see Sections 7.1.1 and 11 of this Decision.
SDGE-23B-06 (SDGE-23-06)	Demonstration of Proper Decision Making for Selection of Undergrounding Projects	SDG&E sufficiently addressed the required progress.
SDGE-23B-07 (SDGE-23-07)	Third-Party Recommendations for Model Improvements	SDG&E did not sufficiently address the required progress. For related areas for continued improvement, see Sections 7.1.3 and 11 of this Decision.
SDGE-23B-08 (SDGE-23-08)	Continuation of Grid Hardening Joint Studies	SDG&E did not sufficiently address the required progress. For related areas for continued improvement, see Sections 8.1.1.1 and 11 of this Decision.

ID	Title	Status
SDGE-23B-09 (SDGE-23-09)	New Technologies Evaluation and REFCL Implementation	SDG&E sufficiently addressed the required progress.
SDGE-23B-10 (SDGE-23-10)	Early Fault Detection Implementation	SDG&E did not sufficiently address the required progress. For related areas for continued improvement, see Sections 8.1.1.1 and 11 of this Decision.
SDGE-23B-11 (SDGE-23-11)	Changes to Scope of Falling Conductor Protection Program	SDG&E sufficiently addressed the required progress.
SDGE-23B-12 (SDGE-23-12)	Covered Conductor Inspection and Maintenance	SDG&E sufficiently addressed the required progress.
SDGE-23B-13 (SDGE-23-13)	QA/QC for Inspections	SDG&E did not sufficiently address the required progress. For related areas for continued improvement, see Sections 8.1.2.1 and 11 of this Decision.
SDGE-23B-14 (SDGE-23-14)	Equipment Maintenance and Repair Maturity Level	SDG&E sufficiently addressed the required progress.
SDGE-23B-15 (SDGE-23-15)	Evaluation of Sensitive Relay Profile in Highest Risk Areas	SDG&E sufficiently addressed the required progress.
SDGE-23B-17 (SDGE-23-17)	Continuation of Effectiveness of Enhanced Clearances Joint Study	SDG&E sufficiently addressed the required progress thus far; Energy Safety will continue to monitor progress. For related areas for continued improvement, see Sections 8.2.1.2 and 11 of this Decision.

ID	Title	Status
SDGE-23B-18 (SDGE-23-18)	Update Targets Table with Planned Improvements' Measurable Targets	SDG&E sufficiently addressed the required progress.
SDGE-23B-19 (SDGE-23-19)	Weather Station Maintenance and Calibration	SDG&E sufficiently addressed the required progress.

Appendix C. Stakeholder Data Request Responses Used in WMP Evaluation

No stakeholder data request responses were cited in this Decision.

Appendix D. Stakeholder Comments on the 2025 WMP Updates

Energy Safety invited stakeholders, including members of the public, to provide comments on the electrical corporations' 2025 WMP Updates. Opening comments on Group 1 WMPs were due on May 7, 2024, and reply comments were due on May 21, 2024.[2] The following individuals and organizations submitted comments that Energy Safety considered in this Decision:

- California Department of Fish and Wildlife (CDFW)
- Mussey Grade Road Alliance (MGRA)
- Rural County Representatives of California (RCRC)
- The Green Power Institute (GPI)
- The Public Advocates Office at the California Public Utilities Commission (Cal Advocates)

Comments received on the 2023-2025 WMPs can be viewed in the 2023-2025 Wildfire Mitigation Plan (2023-2025-WMPs) docket log.

Energy Safety concurred with and incorporated the following stakeholder comments into Energy Safety's findings on SDG&E's 2025 WMP Update:

- Cal Advocates commented that Energy Safety require SDG&E to:
    - Correct shortcomings related to QA/QC of asset inspections.
    - Explain how it will address the impacts of changing its QA/QC process.
    - Examine the potential consequences and trends that may arise from changes to its QA/QC process.
    - Report interim QA/QC pass/fail rates for 2024 based on its current QA/QC procedures.
    - Provide a timeline and the specific steps needed to determine how covered conductor reduces PSPS risk and to revise its wind speed thresholds.

[2] The reply comment period for Group 1 electrical corporations' 2025 WMP Updates was extended from May 17, 2024, to May 21, 2024. See Energy Safety Deadline Extension for 2025 Wildfire Mitigation Plan Update Reply Comments (May 2024) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56689&shareable=true, accessed June 11, 2024).

- GPI commented Energy Safety should require SDG&E to provide a more detailed roadmap of its wildfire risk planning model updates, including those that address the area for continued improvement SDGE-23-02 “Calculating Risk Scores Using Maximum Consequence Values.”
- MGRA commented that Energy Safety should order a re-evaluation of covered conductor wildfire ignition mitigation efficiency that is based on field data.

Appendix E. Stakeholder Comments on the Draft Decision

This appendix will contain Energy Safety's summary of stakeholder comments on Energy Safety's draft Decision on SDG&E's 2025 WMP Update.

Appendix F. Maturity Survey Results

Energy Safety's 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model[3] (Maturity Model) and Electrical Corporation Wildfire Mitigation Maturity Survey[4] (Maturity Survey) together provided a quantitative method to assess the maturity of each electrical corporation's wildfire risk mitigation program.

The Maturity Model consists of 37 individual capabilities describing the ability of electrical corporations to mitigate wildfire risk within their service territory. The 37 capabilities are aggregated into seven categories. The seven mitigation categories are:

A. Risk Assessment and Mitigation Selection
B. Situational Awareness and Forecasting
C. Grid Design, Inspections, and Maintenance
D. Vegetation Management and Inspections
E. Grid Operations and Protocols
F. Emergency Preparedness
G. Community Outreach and Engagement

Maturity levels range from 0 (below minimum requirements) to 4 (beyond best practice). Electrical corporations' responses to the Maturity Survey, listed by mitigation category, are depicted in the figures and tables below.

Figure A-1 displays SDG&E's 2024 response to the Maturity Survey across mitigation categories showing minimum and average values. Figure A-2 compares SDG&E's 2024 response to the Maturity Survey to its 2023 response to the Maturity Survey, depicting values that increased, decreased, or had no change (indicated by "NC").

[3] Energy Safety 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Model (revised and adopted Jan. 2024, published Feb. 2024) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56256&shareable=true, accessed May 6, 2024).

[4] Energy Safety 2023-2025 Electrical Corporation Wildfire Mitigation Maturity Survey (adopted Jan. 2024, revised and published Feb. 2024) (https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56306&shareable=true, accessed May 6, 2024).

Figure A-1. SDG&E 2024 Response to the 2023-2025 Maturity Survey

		1. Capability				2. Capability				3. Capability				4. Capability				5. Capability				6. Capability			
		2023	2024	2025	2026	2023	2024	2025	2026	2023	2024	2025	2026	2023	2024	2025	2026	2023	2024	2025	2026	2023	2024	2025	2026
A. Risk Assessment and Mitigation Strategy		1. Statistical weather, climate, and wildfire modeling				2. Calculation of wildfire and PSPS risk exposure for societal values				3. Calculation of community vulnerability to wildfire and Public Safety Power Shutoffs (PSPS)				4. Calculation of risk and risk components				5. Risk event tracking and integration of lessons learned				6. Risk-informed wildfire mitigation strategy			
	Minimum of Sub-Cap.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.0	3.0	3.0	3.0	1.0	1.0	1.0	1.0
	Average of Sub-Cap.	2.5	2.5	2.5	2.5	2.9	3.0	3.0	3.0	2.8	2.8	2.8	2.8	3.0	3.2	3.2	3.2	3.7	3.7	3.7	3.7	2.8	2.8	2.8	2.8
B. Situational Awareness and Forecasting		7. Ignition likelihood estimation				8. Weather forecasting ability				9. Wildfire spread forecasting				10. Data collection for near-real-time conditions				11. Wildfire detection and alarm systems				12. Centralized monitoring of real-time conditions			
	Minimum of Sub-Cap.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
	Average of Sub-Cap.	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.7	1.9	2.1	2.2	2.2	3.7	3.6	3.6	3.6	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
C. Grid Design, Inspections, and Maintenance		13. Asset inventory and condition database				14. Asset inspections				15. Asset maintenance and repair				16. Grid design and resiliency				17. Asset and grid personnel training and quality							
	Minimum of Sub-Cap.	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4.0	4.0	4.0	4.0				
	Average of Sub-Cap.	3.5	3.5	3.5	3.5	3.7	3.7	4.0	4.0	1.5	1.5	2.0	2.0	2.8	2.8	2.8	2.8	4.0	4.0	4.0	4.0				
D. Vegetation Management and Inspections		18. Vegetation inventory and condition database				19. Vegetation inspections				20. Vegetation treatment				21. Vegetation personnel training and quality											
	Minimum of Sub-Cap.	1.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	4.0	4.0	4.0	4.0	2.0	2.0	2.0	2.0								
	Average of Sub-Cap.	3.3	4.0	4.0	4.0	2.5	3.0	3.0	3.0	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5								
E. Grid Operations and Protocols		22. Protective equipment and device settings				23. Incorporation of ignition risk factors in grid control				24. PSPS operating model				25. Protocols for PSPS re-energization				26. Ignition prevention and suppression							
	Minimum of Sub-Cap.	4.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	1.0	1.0	1.0	1.0	4.0	4.0	4.0	4.0				
	Average of Sub-Cap.	4.0	4.0	4.0	4.0	3.2	3.2	3.2	3.2	3.8	3.8	3.8	3.8	3.3	3.3	3.3	3.3	4.0	4.0	4.0	4.0				
F. Emergency Preparedness		27. Wildfire and PSPS emergency and disaster preparedness plan				28. Collaboration and coordination with public safety				29. Public emergency communication strategy				30. Preparedness and planning for service restoration				31. Customer support in wildfire and PSPS emergencies				32. Learning after wildfires and PSPS incidents			
	Minimum of Sub-Cap.	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	2.0	2.0	4.0	4.0	4.0	4.0	4.0	4.0	2.0	2.0	2.0	2.0
	Average of Sub-Cap.	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	2.7	2.7	2.7	2.7	3.7	3.7	4.0	4.0	4.0	4.0	4.0	4.0	2.0	2.0	2.0	2.0
G. Community Outreach and Engagement		33. Public outreach and education awareness				34. Public engagement in electrical corporation wildfire mitigation planning				35. Engagement with AFN and socially vulnerable populations				36. Collaboration on local wildfire mitigation planning				37. Cooperation and best practice sharing with other electrical corporations							
	Minimum of Sub-Cap.	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
	Average of Sub-Cap.	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				

Figure A-2. SDG&E Maturity Survey Changes from 2023 to 2024

		1. Capability				2. Capability				3. Capability				4. Capability				5. Capability				6. Capability			
		2023	2024	2025	2026	2023	2024	2025	2026	2023	2024	2025	2026	2023	2024	2025	2026	2023	2024	2025	2026	2023	2024	2025	2026
A. Risk Assessment and Mitigation Strategy		1. Statistical weather, climate, and wildfire modeling				2. Calculation of wildfire and PSPS risk exposure for societal values				3. Calculation of community vulnerability to wildfire and Public Safety Power Shutoffs (PSPS)				4. Calculation of risk and risk components				5. Risk event tracking and integration of lessons learned				6. Risk-informed wildfire mitigation strategy			
	Minimum of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	Average of Sub-Cap.	NC	NC	NC	NC	NC	-0.3	-0.3	-0.3	NC	NC	NC	NC	NC	+0.11	+0.11	+0.11	NC	NC	NC	NC	NC	NC	NC	NC
B. Situational Awareness and Forecasting		7. Ignition likelihood estimation				8. Weather forecasting ability				9. Wildfire spread forecasting				10. Data collection for near-real-time conditions				11. Wildfire detection and alarm systems				12. Centralized monitoring of real-time conditions			
	Minimum of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	Average of Sub-Cap.	NC	NC	NC	NC	NC	+0.09	+0.09	+0.09	NC	+0.11	+0.11	+0.11	NC	-0.1	-0.1	-0.1	NC	NC	NC	NC	NC	NC	NC	NC
C. Grid Design, Inspections, and Maintenance		13. Asset inventory and condition database				14. Asset inspections				15. Asset maintenance and repair				16. Grid design and resiliency				17. Asset and grid personnel training and quality							
	Minimum of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC				
	Average of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC				
D. Vegetation Management and Inspections		18. Vegetation inventory and condition database				19. Vegetation inspections				20. Vegetation treatment				21. Vegetation personnel training and quality											
	Minimum of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC								
	Average of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC								
E. Grid Operations and Protocols		22. Protective equipment and device settings				23. Incorporation of ignition risk factors in grid control				24. PSPS operating model				25. Protocols for PSPS re-energization				26. Ignition prevention and suppression							
	Minimum of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC				
	Average of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC				
F. Emergency Preparedness		27. Wildfire and PSPS emergency and disaster preparedness plan				28. Collaboration and coordination with public safety partners				29. Public emergency communication strategy				30. Preparedness and planning for service restoration				31. Customer support in wildfire and PSPS emergencies				32. Learning after wildfires and PSPS incidents			
	Minimum of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	Average of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
G. Community Outreach and Engagement		33. Public outreach and education awareness				34. Public engagement in electrical corporation wildfire mitigation planning				35. Engagement with AFN and socially vulnerable populations				36. Collaboration on local wildfire mitigation planning				37. Cooperation and best practice sharing with other electrical corporations							
	Minimum of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC				
	Average of Sub-Cap.	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC				