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

OFFICE OF ENERGY INFRASTRUCTURE SAFETY
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Caroline Thomas Jacobs, Director

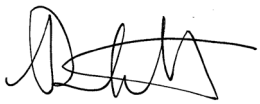
June 25, 2025

Dear Stakeholders,

Enclosed is the Office of Energy Infrastructure Safety's (Energy Safety's) Annual Report on Compliance regarding San Diego Gas & Electric Company's execution of its 2023 Wildfire Mitigation Plan.

This Annual Report on Compliance is published as of the date of this letter. San Diego Gas & Electric Company may, if it wishes to do so, file a public response to this Annual Report on Compliance within 14 calendar days of the date of publication. Comments must be submitted to the Energy Safety's E-Filing system in the 2023 Annual Report on Compliance docket.[1]

Sincerely,



Patrick Doherty
Program Manager | Compliance Assurance Division
Electrical Infrastructure Directorate
Office of Energy Infrastructure Safety

[1] Submit responses to the 2023-ARC docket via the Office of Energy Infrastructure Safety's E-Filing system here: https://efiling.energysafety.ca.gov/EFiling/DocketInformation.aspx?docketnumber=2023-ARC.

OFFICE OF ENERGY INFRASTRUCTURE SAFETY

2023 ANNUAL REPORT ON COMPLIANCE

SAN DIEGO GAS & ELECTRIC COMPANY

June 2025

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Executive Summary

The Office of Energy Infrastructure Safety (Energy Safety) is tasked with evaluating and either approving or denying Wildfire Mitigation Plans (WMPs) annually filed by electrical corporations pursuant to Public Utilities Code section 8386 *et seq*. The law also directs Energy Safety to ensure that the electrical corporations have complied with their WMPs.

Energy Safety's evaluation found that San Diego Gas & Electric Company (SDG&E) completed 38 of 48 (79%) of its 2023 targets for initiative activities and objectives in its 2023-2025 Base WMP (2023 WMP). Of the 38 completed initiatives, eight were from the largest 10 initiatives by planned expenditure. Overall, SDG&E failed to meet targets for 10 of its 2023 WMP targets for initiative activities and objectives.

For the 2023 compliance year, SDG&E spent below its planned amount by approximately $2.7 million (0.1% of the planned budget). SDG&E explained actual spending deviated from its planned spending due to a variety of factors, including, but not limited to, design and construction delays, materials and labor costs, and generally misestimating planned expenditure amounts.

With respect to SDG&E's performance on ignition risk and outcome metrics in 2023, ignitions have continually declined from 2020 to 2023, whereas other outcomes such as outages and wires down have remained stable from 2016 to 2023. Public Safety Power Shutoff (PSPS) events and acres burned exhibited subsequent decreases in 2021 and remained low through 2023.

Pursuant to Government Code section 15475.1, Energy Safety's primary objective is to ensure that electrical corporations reduce wildfire risk and comply with energy infrastructure safety measures. Energy Safety's annual compliance evaluation of SDG&E's execution of its 2023 WMP is a comprehensive look at whether SDG&E's completion of its 2023 WMP initiatives reduced the risk of its equipment igniting a catastrophic wildfire.

Energy Safety conducted its compliance review process through a variety of means including audits, field inspections, and analysis of data submitted by SDG&E to Energy Safety. Energy Safety also evaluated several performance metrics, including metrics that reveal the risk on SDG&E's system. Energy Safety additionally reviewed SDG&E's self-assessment in its Electrical Corporation Annual Report on Compliance (EC ARC) and the findings of its independent evaluator.

Energy Safety has identified areas for improvement in the accuracy of documentation of its WMP implementation by SDG&E and expects SDG&E to improve the accuracy of its documentation going forward.

Energy Safety acknowledges that in 2023, SDG&E undertook efforts to reduce its wildfire risk, and in many instances achieved its WMP initiative activity targets.

On balance, SDG&E was successful in executing its plan for wildfire risk mitigation. However, there are still areas to improve upon and opportunities to continue learning, especially considering the missed initiative targets.

1. Introduction

This Annual Report on Compliance (ARC) presents the Office of Energy Infrastructure Safety's (Energy Safety's) statutorily mandated assessment of San Diego Gas & Electric Company's (SDG&E's) compliance with its 2023 targets for initiatives and objectives in its 2023-2025 Base Wildfire Mitigation Plan (2023 WMP).[1] While the 2023-2025 Base WMP considers activities over a three- and ten-year horizon, this report only addresses targets established for initiatives and objectives for the 2023 compliance year. Therefore, this report uses the term "2023 WMP" to refer to portions of the 2023-2025 Base WMP addressed by this report.

In the sections that follow, Energy Safety describes the statutory and regulatory basis for its reporting, the information supplied by the electrical corporation, and the independent evaluation conducted by a third-party independent evaluator that examined SDG&E's execution of its 2023 WMP and how its infrastructure performed in 2023 relative to wildfire risk. Finally, Energy Safety provides its conclusions, observations, and recommendations for further actions by SDG&E.

1.1 Compliance Process

The statutory objective of electrical corporation wildfire mitigation planning efforts is to ensure that electrical corporations are constructing, maintaining, and operating their infrastructure in a manner that will minimize the risk of catastrophic wildfire.[2]

Energy Safety's 2024 Compliance Process, as approved by the California Public Utilities Commission, establishes the parameters for this Annual Report on Compliance. Consistent with the 2024 Compliance Process, this report considers the totality of all compliance assessments completed with respect to SDG&E's 2023 WMP. This includes all inspection, audit, investigation, and data analysis work performed by Energy Safety, as well as separate electrical corporation and independent third-party evaluations of compliance.[3]

Energy Safety assessed whether the electrical corporation met the 2023 WMP targets for initiatives and objectives, looking specifically at whether the electrical corporation funded and performed the work stated for each initiative.[4]

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[1] 2023 WMP.
[2] Pub. Util. Code § 8386(a).
[3] Compliance Process, page 8.
[4] Compliance Process, page 8.

2. SDG&E 2023 Wildfire Mitigation Plan

SDG&E submitted a comprehensive WMP in 2023 covering a three-year term from 2023 through the end of 2025.[5]

Energy Safety approved SDG&E's 2023 WMP on October 13, 2023.[6] SDG&E's 2023 WMP highlighted past and ongoing efforts to mitigate wildfire risk related to electrical infrastructure and reduce the impacts of Public Safety Power Shutoff (PSPS) events.[7] The WMP contained 48 initiatives and other activities, which are divided up into eight categories and summarized here:[8]

- Risk Methodology and Assessment: SDG&E planned to develop its risk models to improve its analytics capabilities and to inform decision-making. SDG&E planned to develop a risk modeling improvement plan, which included evaluation of additional factors in risk models such as social vulnerability and impacts of climate change.
- Wildfire Mitigation Strategy: SDG&E planned to develop its wildfire mitigation strategy including making changes to its risk model and real-world lessons learned through initiative implementation. SDG&E planned to update its strategies as new information including climate change, weather patterns, and mitigation effectiveness is studied and validated.
- Grid Design, Operations, and Maintenance: SDG&E planned to continue to work on its covered conductor and strategic undergrounding efforts in addition to implementing specific equipment upgrades such as expulsion fuse replacements, installation of additional sectionalizing, and upgrading to supervisory control and data acquisition (SCADA) devices across the system (WMP.453). SDG&E planned to continue to expand the use and development of enhanced inspection technologies, such as infrared inspections of overhead distribution (WMP.481), drone assessments (WMP.552), and intelligent image processing (WMP.1342) that enables detection of damage and collection of data on vegetation.
- Vegetation Management and Inspections: SDG&E planned to continue developing its vegetation management program by tracking and maintaining its tree and pole asset database (WMP.511) for all activities including detailed inspections (WMP.494); off-

[5] 2023 WMP.
[6] WMP Decision.
[7] 2023 WMP, pages 1-10.
[8] 2023 WMP, pages 16-24.

cycle patrol inspections (WMP.508); trimming, removals, and enhanced vegetation management (WMP.501); pole brushing (WMP.512); and auditing (WMP.505).

- Situational Awareness and Forecasting: SDG&E planned to continue fire science modeling and weather analysis, including fully automating fire detection capabilities, exploring sensor technologies for portable monitoring in field trucks, exploring smoke plume modeling technology, and building new machine learning wind speed gust models. Additionally, SDG&E planned to continue its partnership with academia to further develop fire science for integration into Santa Ana wind threat index (WMP.540) and fire potential index (FPI) (WMP.450) as well as evaluate large computational resources that include a module for impact of large eddy-scale weather.
- Emergency Preparedness: SDG&E planned to expand emergency management operations by increasing staff dedicated to enhancing various emergency programs, modifying workforce training, streamlining processes and documentation management, improving collaboration by developing a software solution allowing for third-party access, and creating dashboards that incorporate human factors engineering into PSPS decision-making tools (WMP.1335).
- Community Outreach and Engagement: SDG&E planned to continue soliciting feedback from its partners and communities served (WMP.1337). SDG&E planned to continue refining and augmenting its year-round safety education and communication campaigns, enhancing mobile application and communication platforms, leveraging school communication platforms, and expanding public education for limited English proficiency populations and tribal communities (WMP.1336).
- Public Safety Power Shutoff: SDG&E planned to continue the implementation of grid hardening initiatives and resiliency programs to reduce the likelihood and consequences of PSPS events.

The 2023 WMP also contains three- and ten-year objectives.

Selected three-year objectives include:

- Install equipment approved as exempt by the California Department of Forestry and Fire Protection (e.g., expulsion fuses (WMP.459), lightning arresters (WMP.550), and avian protection (WMP.972)).
- Complete overhead hardening efforts in High Fire Threat District (HFTD) Tier 3 areas and continue to work on overhead hardening in HFTD Tier 2 areas (WMP.1195).
- Expand the use and development of enhanced inspection technologies such as infrared inspections of overhead distribution (WMP.481), drone assessments (WMP.552), and intelligent image processing (WMP.1342) to detect damage and collect data on distribution and vegetation.

- Continue to provide fixed and portable backup power solutions and rebates on portable backup power solutions to residential and commercial customers who experience frequent PSPS.
- Continue to implement the vegetation management work plan with enhanced clearances (WMP.501) in high-risk areas (going above regulatory requirements in HFTD and non-HFTD).
- Continue a Fuels Management Program (WMP.497) to thin flammable vegetation around select poles subject to Public Resources Code section 4292 using risk and environmental impact criteria.[9] Pilot alternate methods of thinning such as the cultural use of goats for sustainability goals (WMP.1327).
- Continue improving existing models (FPI (WMP.450), Santa Ana wind threat index (SAWTI) (WMP.540) by noting and evaluating discrepancies between predictions and observed reality.
- Continue to develop the "WiNGS" risk model to assess wildfire risk and study customer impacts of PSPS events.

Selected ten-year objectives include:

- Complete hardening within the HFTD and begin hardening efforts for high-risk wildland urban interface (WUI) areas (WMP.543, WMP.544, and WMP.545).
- Optimize inspection cycles based on risk, end distribution intrusive inspection 10-year cycle, and enhance inspection capabilities to identify high risk assets (WMP.478, WMP.479, WMP.481, WMP.482, WMP.483, WMP.1190, WMP.552, WMP.488, WMP.489, WMP.555, and WMP.492).
- Replace legacy transmission asset management system with industry standard technology (WMP.478, WMP.479, WMP.481, WMP.482, WMP.483, WMP.1190, WMP.552, WMP.488, WMP.489, WMP.555, and WMP.492).
- Continue to enhance inspection capabilities to identify high risk assets (WMP.478, WMP.479, WMP.481, WMP.482, WMP.483, WMP.1190, WMP.552, WMP.488, WMP.489, WMP.555, and WMP.492).
- Install switches in strategic locations improving the ability to isolate high-risk areas for potential de-energizations (WMP.461).

Of particular importance are the following WMP objectives which have targets or goals for the 2023 compliance year:

[9] PRC, Section 4292.

- Complete HFTD Tier 3 work for SDG&E's transmission system hardening program (WMP.543).
- Implement a dedicated line inspector program to perform routine inspection types (WMP.1334).
- Harden the backbone communication network for mountaintop cameras by replacement of legacy equipment and work to explore Artificial Intelligence (AI) technology for image processing (WMP.1343).

Descriptions and a complete list of the objectives and initiatives contained in SDG&E's 2023 WMP are listed in the table in Appendix A.

3. SDG&E Annual Report on Compliance

Public Utilities Code section 8386.3(c)(1) directs electrical corporations to file a report addressing the electrical corporation's compliance with their WMP during a compliance year. This document is known as the Electrical Corporation Annual Report on Compliance (EC ARC).

Energy Safety's 2023 Compliance Guidelines outlined the requirements for an EC ARC prepared to address the 2023 compliance year and filed by the electrical corporation in early 2024. The EC ARC was required to detail the electrical corporation's self-assessment of its compliance with the 2023 WMP during the 2023 compliance period.[10]

SDG&E submitted its EC ARC to Energy Safety on April 1, 2024.[11] The following is a narrative summary of the EC ARC.

In general, in the EC ARC, SDG&E asserted that it met the risk reduction goals outlined in its 2023 WMP. According to SDG&E's 2023 EC ARC, SDG&E implemented and tracked the progress of 39 different quantitative mitigation programs outlined in its 2023 WMP.[12]

In the EC ARC, SDG&E stated that its mitigations included grid hardening, inspection and maintenance, and vegetation management programs, which are all aimed at mitigating the risk of ignitions related to the electric system. Additional categories included situational awareness, which informs SDG&E's risk models and helped prioritize infrastructure replacement and upgrades, and emergency planning and preparedness, which enabled strategies and tools for real time decision making during emergency response and public safety power shutoff (PSPS) events.

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[10] Compliance Guidelines.
[11] EC ARC.
[12] EC ARC, page 1

In the EC ARC, SDG&E further outlined mitigations aimed at reducing the impact of ignition-caused wildfires, including high-definition cameras, ground and aerial fire suppression resources, and a fuels management program. Lastly, SDG&E reported that it implemented mitigations designed to minimize the customer impacts associated with PSPS events, including the installation of sectionalizing devices and customer service efforts including the generator grant program (GGP) and community resource centers (CRC), which are operated during PSPS events, as well as customer outreach programs, which are aimed at wildfire and PSPS preparedness.

3.1 EC ARC Information on Initiative Completion

In the EC ARC, SDG&E maintained that it met or exceeded the risk reduction intent, as described in the 2023 WMP, for 33 of 39 program initiatives.[13, 14] SDG&E highlighted, in their EC ARC, the following as key accomplishments in 2023:[15]

- Fire hardened 95 miles of its overhead electric system within the High Fire Threat District (HFTD) areas.
- Undergrounded 72 miles of its electric system within the HFTD areas.
- Completed routine and HFTD area-focused distribution, substation, and transmission inspections, including timely remediation according to general order requirements.
- Completed risk-based drone inspections, including structures in Tier 2 and Tier 3 of the HFTD areas and in the WUI.
- Completed vegetation management annual inspections and trimming, including the inspection of over 514,000 trees in the service territory and the trimming or removal of over 13,000 targeted trees to enhance clearance levels.
- Enhanced situational awareness capabilities by upgrading or rebuilding 50 weather stations.

In the EC ARC, SDG&E self-reported that it did not meet six quantitative program targets. Of these targets, SDG&E reported that two met the risk reduction intent, one did not provide direct risk reduction and will be completed in 2024, and the remaining three did not meet

[13] EC ARC, pages 40-42, 57, and 63.

[14] Energy Safety evaluates a total of 48 targets in this ARC, which includes the 39 initiatives from the EC ARC, along with nine additional targets related to vegetation management work from Energy Safety's Substantial Vegetation Management Audit.

[15] EC ARC, page 35.

their risk reduction intent and will be completed in 2024.[16] In the EC ARC, SDG&E self-reported initiatives with missed targets include:[17]

- Transmission Overhead Detailed Inspections (WMP. 479): In the EC ARC, SDG&E reported completing inspections on 1,928 structures against a target of 2,387 structures (81%). SDG&E claimed this program met the risk reduction intent. SDG&E forecasted it would complete inspections on the remaining 459 structures in the first quarter of 2024.
- Advanced Protection (WMP.463): In the EC ARC, SDG&E reported completing four circuits against a target of five circuits (80%). SDG&E claimed this program met the risk reduction intent as a substantial portion of the one remaining circuit was planned for undergrounding. The remaining circuit work was expected to be completed by the end of the 2023-2025 WMP cycle.
- Distribution Communications Reliability Improvements (WMP.549): In the EC ARC, SDG&E reported completing 11 base stations against a target of 35 base stations (31%). SDG&E claimed this program does not directly reduce risk. SDG&E indicated delays were due to longer-than-expected distribution and transmission engineering design reviews. SDG&E indicated it would make a concerted effort to optimize and streamline project review and approval processes, and that it would develop a standard for all projects to help improve review timeframes and expedite its approvals.
- Strategic Undergrounding (WMP.473): In the EC ARC, SDG&E reported completing 72 miles against a target of 84 miles (86%). SDG&E claimed this program met 86% of its risk reduction intent. SDG&E indicated the program did not meet its full target due to issues with permits, easements, materials, weather conditions, customer property access, and design changes due to customer requests and field conditions.
- Strategic Pole Replacement Program (WMP.1189): In the EC ARC, SDG&E reported completing one pole replacement against a target of 60 poles (2%). SDG&E claimed this program did not meet the risk reduction intent. SDG&E indicated the program began in 2023 and experienced delays with onboarding engineering and design consultants for the 2023 scope of work. SDG&E highlighted that poles not completed in 2023 were scheduled to be completed in 2024.
- Early Fault Detection (WMP.1195): In the EC ARC, SDG&E reported completing 32 nodes against a target of 60 nodes (53%). SDG&E claimed this program met 53% of its risk reduction intent. SDG&E noted that construction-ready jobs were proactively paused due to design improvements found during post-construction review of previously

[16] EC ARC, page 36.
[17] EC ARC, pages 44, 46, 47, 49, and 51.

constructed sites. SDG&E indicated that construction would resume in the second quarter of 2024. SDG&E noted the temporary pause was necessary to ensure optimal ease of construction and resulting performance of the system.

These six self-declared missed initiatives along with all the other initiatives are listed in the table in Appendix A.

3.2 EC ARC Information on Initiative Funding

In general, SDG&E indicated in the EC ARC that it spent below the planned amounts by approximately $20.2 million.[18] This amount is broken out by capital and operational expenditures in Table 1.[19] Actual spending deviated from planned spending for various reasons, including but not limited to design and construction delays, less- or more-than-variance in the planned volume of work completed, materials and labor costs, and over- or misestimations of planned expenditure amounts.

Table 1. Overview of EC ARC Reported 2023 WMP Budget and Expenditures

	Planned	Actual	Over/(Under)
Capital Expenditures	$562.3 Million	$525.7 Million	($36.6 Million)
Operational Expenditures	$207.4 Million	$223.8 Million	$16.4 Million
Total	$769.7 Million	$749.5 Million	($20.2 Million)

[18] This amount is self-reported by SDG&E but differs from the amount decided upon by Energy Safety and reported in the Executive Summary, Conclusions, and Independent Evaluator ARC for SDG&E Sections.

[19] These values are as reported in the EC ARC and do not necessarily align with Energy Safety findings listed in Appendix A. For example, SDG&E reported expenditures in the EC ARC for initiatives that had no corresponding targets in its WMP: allocation methodology development and application (WMP.523), microgrids (WMP.462), centralized repository for data (WMP.519), and emergency preparedness plan (WMP.1008).

4. Independent Evaluator ARC for SDG&E

Energy Safety, in consultation with the Office of the State Fire Marshal, annually publishes a list of entities qualified to serve as independent evaluators of WMP compliance.[20] Each electrical corporation is then required to hire an independent evaluator (IE) from the list to perform an independent WMP compliance evaluation.[21]

The IE reviews and assesses the electrical corporation's compliance with its approved WMP. As part of its evaluation, the IE must determine whether the electrical corporation failed to fund any activities included in its plan.

On July 1st of each year, the IE issues its Independent Evaluator Annual Report on Compliance (IE ARC) for a given electrical corporation.[22]

The 2023 IE ARC for SDG&E was prepared by Bureau Veritas North America Inc. The IE ARC included a review of the wildfire mitigation initiatives and activities implemented in 2023, and an accounting of whether SDG&E met its performance targets, underfunded any of the initiatives, and followed its quality assurance and quality control (QA/QC) processes.

The IE concluded that SDG&E met its 2023 WMP goals of reducing the risk of wildfires in the communities it serves.[23] The IE also evaluated SDG&E's funding of initiatives but did not draw an overall conclusion as to whether SDG&E's overall under-expenditure impacted its ability to meet its objectives.[24] Finally, the IE reviewed SDG&E's QA/QC processes and validated all QA/QC programs.[25]

The IE utilized a variety of techniques to analyze SDG&E's progress toward meeting its WMP commitments, such as including inspecting a sample of SDG&E's field-verifiable WMP initiatives and performing desk audits of non-field verifiable initiatives. The IE evaluated a total of 39 initiatives with targets in the IE ARC. The IE segregated 23 large volume (=> 100 units) quantifiable initiatives from the 39 total initiatives evaluated in the IE ARC. Of the 23 large volume initiatives, six were field verifiable and the remaining 17 were non-field verifiable initiatives that were analyzed by inspecting data samples.[26] The remaining 16 WMP initiatives had smaller unit quantifiable goals (<100 units). The IE confirmed the completion

[20] Pub. Util. Code § 8386.3(c)(2)(A).
[21] Pub. Util. Code § 8386.3(c)(2)(B)(i).
[22] Pub. Util. Code § 8386.3(c)(2)(B)(i).
[23] IE ARC, page 96.
[24] IE ARC, page 68.
[25] IE ARC, Table 50.
[26] IE ARC, pages 27 and 41.

of the work required for all six large volume, field verifiable goals.[27] The IE was able to validate successful completion on 16 of the remaining 17 non-field verifiable, large volume initiatives.[28] Along with the large quantifiable goals, the IE confirmed completion of nine of the 16 small volume quantifiable goals. The IE determined that SDG&E achieved its large volume, field verifiable goals and target objectives described in the 2023 WMP. The eight total initiatives that the IE ARC found were not complete are indicated as such in the table in Appendix A.

As a result of the evaluation conducted, the IE provided observations on SDG&E in certain areas:

- SDG&E was unable to meet the target for Transmission Overhead Detailed Inspections (WMP.479) due to the lack of access, lack of permission, and weather-related complications for transmission overhead inspections.
- SDG&E completed only 32 of the 60 planned installations of early fault detection system for 2023.
- The IE reviewed three wood pole intrusive inspections due to inconsistent data received pertaining to this inspection type.
    - Only two poles received audits, as one of the poles was not able to be accessed.
    - The IE documented issues such as termites and heart rot for the poles audited.

The IE evaluated financial data for 62 initiatives, including both quantitative and qualitative initiatives.[29] In general, the IE ARC found that 41 of SDG&E's WMP activities for 2023 were funded below the planned amount (approximately 66%) and that eight of the 41 initiative targets (approximately 20%) were not met.[30]

5. Energy Safety Assessment of WMP Initiative Completion

Energy Safety's assessment of SDG&E's performance in 2023 indicates that SDG&E attained 38 of its 48 targets (79%) for its 2023 WMP initiative activities and objectives and did not attain 10 of 48 targets (21%) for its 2023 WMP initiative activities and objectives. The subsections below describe Energy Safety's assessment of SDG&E's execution of its 2023 WMP.

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[27] IE ARC, page 27.
[28] IE ARC, pages 37-38. WMP.491 was determined to be complete by the IE even though both the IE and EC verified 150 of the 160 inspections were completed.
[29] IE ARC, page 68.
[30] IE ARC, pages 68-80.

5.1 SDG&E 2023 WMP Initiative Activities Assessed by Energy Safety

Energy Safety assessed 48 wildfire mitigation initiatives from the 2023 WMP. The initiatives that were assessed were grouped into three main categories:

1. Grid Design, Operations, and Maintenance with 32 initiatives assessed and a funding budget of $560 million for the assessed initiatives.
2. Vegetation Management and Inspection with 15 initiatives assessed and a funding budget of $122 million for the assessed initiatives. Of the 15 initiatives assessed, 13 were assessed in the Substantial Vegetation Management (SVM) Audit Report and the remaining two are assessed in this ARC.[31]
3. Situational Awareness and Forecasting with one initiative assessed and a funding budget of $86,000 for the assessed initiative.

A complete list of initiatives appears in Appendix A, Table 5.

The initiative assessment process included comparing the actual initiative completion figures reported by SDG&E in the QDR, the EC ARC, the IE ARC, and DR-280 response.[32] The information from each of these sources are summarized along with the final assessment of compliance for each initiative in the table in Appendix A. Vegetation initiatives were assessed in the SVM Audit and SVM Audit Report with conclusions brought over to this document.[33] In some cases, a data request may have been issued by Energy Safety to answer specific questions. If data request information is used in the assessment, a citation for the particular instance is provided.

5.2 Energy Safety Substantial Vegetation Management Audit

Public Utilities Code section 8386.3(c)(5) requires Energy Safety to perform an audit of the work performed by, or on behalf of, an EC with respect to the vegetation management requirements in its WMP.[34] Energy Safety refers to this audit as the SVM Audit. Pursuant to section 8386(c)(5), Energy Safety conducted an audit of SDG&E's work with respect to its vegetation management requirements for the 2023 compliance year.

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[31] Two missing initiatives in SVM Audit Report are: Off-Cycle Patrol Inspections - WMP Sections 8.2.2.1.1 (page 258) and 8.2.2.2 (page 266) and Fuels Management - WMP Section 8.2.3 (page 269).
[32] 2023 Q4 QDR, EC ARC, IE ARC, and DR-280 Response.
[33] SVM Audit Report.
[34] Pub. Util. Code § 8386.3(c)(5).

On December 31, 2024, Energy Safety issued its SVM Audit for SDG&E.[35] The purpose of the SVM Audit is to assess whether SDG&E met its quantitative commitments and verifiable statements in its 2023 WMP related to vegetation management activities. In the SVM Audit, Energy Safety reviewed 13 vegetation management initiatives detailed in SDG&E's 2023 WMP and found that SDG&E did not perform all the work specified for five of 13 vegetation management initiatives. Energy Safety required SDG&E to provide a Corrective Action Plan response within 30 days from the issuance of the SVM Audit.[36]

On January 31, 2025, SDG&E submitted its Corrective Action Plan to Energy Safety.[37] Subsequently, Energy Safety issued an SVM Audit Report on April 21, 2025, which found that, based on the information provided in the Corrective Action Plan, SDG&E completed all but one of the vegetation management initiatives.[38] The SVM Audit Report found that SDG&E substantially complied with a substantial portion of the vegetation management requirements in its 2023 WMP, by completing 12 of 13 vegetation management initiatives.[39]

The specific findings from Energy Safety's SVM Audit Report are summarized in Appendix B.

5.3 SDG&E WMP Objective and Initiative Activity Attainment in 2023

Energy Safety assessed 48 wildfire mitigation initiatives from the 2023 WMP and found that ten initiative activities were not completed (21%).

The EC ARC, IE ARC, and SVM Audit Report evaluated a total of 39, 39, and 13 initiatives, respectively. An overview of the various data sources and their total initiatives evaluated are provided in Table 2.

As reported in Section 5.2, the SVM Audit Report evaluates 13 of the 15 vegetation management initiatives from the WMP. Of the 13 evaluated, four are also evaluated by the IE ARC so that nine initiatives are not evaluated by the IE ARC.[40] The nine initiatives evaluated exclusively by the SVM Audit Report, when added to the 39 initiatives evaluated by the IE ARC, lead to a total of 48 WMP initiatives evaluated by this report.

For a summary of the 48 total initiatives and each source of data used for their evaluation, see the table in Appendix A. Regarding missed initiatives, the EC ARC counts six and the IE ARC counts eight. The two additional initiatives that were found not to be met in the IE ARC were

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[35] SVM Audit.
[36] SVM Audit, cover letter.
[37] SVM Audit Corrective Action Plan.
[38] SVM Audit Report, page 21.
[39] SVM Audit Report, pages 4-21.
[40] The six vegetation initiatives evaluated by both the IE ARC and the SVM Audit Report are: Detailed Vegetation Inspections (8.2.2.1), Off-Cycle Patrol Inspections (8.2.2.1.1 and 8.2.2.2), Fuels Management (8.2.3), Pole Clearing (8.2.3.1), Clearance "Enhanced" (8.2.3.3.3), and QA/QC Vegetation Management (8.2.5.1).

reported as met in the EC ARC as SDG&E believe that they met the risk reduction intent despite the missed target.[41]

There were two more initiatives that were determined by Energy Safety to be not met, including one originally described in the SVM Audit Report.[42] The eight initiatives found not to be met from the IE ARC are added to these two for a total of 10 initiatives not met (79% of the total).

The ten not attained initiative activities from SDG&E's 2023 WMP are: Undergrounding of Electric Lines and/or Equipment (WMP.473), Advanced Protection (i.e., falling conductor protection, sensitive ground fault protection, sensitive relay profile settings, etc.) (WMP.463), Early Fault Detection (WMP.1195), Transmission Overhead Detailed Inspections (WMP.479), Distribution Communications Reliability Improvements (WMP.549), Strategic Pole Replacement Program (WMP.1189), Expulsion Fuse Replacement Program (WMP.459), QA/QC Distribution Detailed Inspections (WMP.491), Wood and Slash Management (WMP.497), and Air Quality Index (AQI) Sensor Installation (WMP.970). The targets and actual attainments for these initiatives are shown in Table 2.

Table 2. SDG&E Non-attainment of WMP Initiative Activities

Not Attained SDG&E 2023 WMP Initiative	2023 WMP Initiative Activity Target	Actual Performance[43]
Undergrounding of Electric Lines and/or Equipment 8.1.2.2 WMP.473	Target: 84 miles	Actual: 70.3 miles
Advanced Protection 8.1.2.8.1 WMP.463	Target: five circuits	Actual: four circuits

[41] The two initiatives are Expulsion Fuse Replacement (8.1.4.4) and Air Quality Index Sensor Installation (8.3.2.1.3).
[42] The initiative found not met by the SVM Audit Report is Wood and Slash Management (8.2.3.2). The other initiative independently determined by Energy Safety to be not met is QA/QC of Distribution Detailed Inspection (8.1.6.2).
[43] DR-280 Response was used as the source of this information.

Not Attained SDG&E 2023 WMP Initiative	2023 WMP Initiative Activity Target	Actual Performance[43]
Early Fault Detection 8.1.2.8.2 WMP.1195	Target: 60 nodes	Actual: 32 nodes
Distribution Communications Reliability Improvements 8.1.2.8.3 WMP.549	Target: 35 stations	Actual: 11 base stations
Strategic Pole Replacement Program 8.1.2.10.2 WMP.1189	Target: 60 poles	Actual: one pole
Transmission Overhead Detailed Inspections 8.1.3.2 WMP.479	Target: 2,387 inspections	Actual: 1,928 structures inspected
Expulsion Fuse Replacement Program 8.1.4.4 WMP.459	Target: 40 fuses	Actual: 36 fuses

Not Attained SDG&E 2023 WMP Initiative	2023 WMP Initiative Activity Target	Actual Performance[43]
QA/QC of Distribution Detailed Inspections 8.1.6.2 WMP.491	Target: SDG&E's 2023 WMP stated that it would have construction supervisors perform a field audit to validate the results of an inspection performed, with between 0.5 percent and 1.5 percent of completed inspections per inspector randomly selected and audited.[44] In its EC ARC, SDG&E clarified that its projected target for this initiative activity was 160 inspections, and that it only met 94% of the target with 150 actual inspections completed.[45]	Target: 160 structures Actual: 150 structures
Wood and Slash Management 8.2.3.2 WMP.497	Target: SDG&E's 2023 wood and slash management activities included a fuels management target of 500 poles. SDG&E also included narrative commitments to remove wood and slash debris following vegetation management activities, increase the amount of material diverted to a recycling facility, and remove all debris from channels and banks of water courses.	Energy Safety's SVM Audit and Report determined that SDG&E was not able to demonstrate that all wood and slash debris resulting from routine trimming and removal activities were chipped on site and removed from properties the same day, unless requested otherwise.[46]

[44] 2023 WMP, pages 227-228.
[45] EC ARC, pages 40 and 54.
[46] SVM Audit Report, page 12.

Not Attained SDG&E 2023 WMP Initiative	2023 WMP Initiative Activity Target	Actual Performance[43]
Air Quality Index Sensor – Installation 8.3.2.1.3 WMP.970	Target: six sensors	Actual: five sensors

5.3.1 Budget Impact of Not Attained Initiatives

Planned and actual expenditures in the EC and IE ARCs differed from Energy Safety's analysis as the EC and IE ARC incorporated initiatives with and without quantitative targets in their budgets while Energy Safety accounted only for initiatives with defined quantitative targets.[47] The EC and IE ARC reported planned expenditures of $769.7 million and actual spending of $749.5 million, whereas Energy Safety's analysis concluded with $631.8 million planned and $629 million spent.

The total amount budgeted for the ten not attained initiative activities was $298 million, or 47% of the approximate $630 million allocated in the 2023 WMP budget. Of the 10 largest initiatives by budgeted amount, two were not attained and represented a budgeted amount of $279 million, or 49%, of the $569 million allocated for these 10 initiatives in 2023. These two initiatives were for Strategic Undergrounding (WMP.473) and a Long-Term Evolution (LTE) Communication Network (WMP.549).

When accounting for the partial amount that was spent on incomplete initiative activities, $276 million of the original budgeted amount of $298 million for these initiative activities was spent (93% of the budget).

5.3.2 Risk Impact of Not Attained Initiatives

Energy Safety's WMP Technical Guidelines requires an electrical corporation to calculate the relative risk impact of its mitigation activities by subtracting the risk remaining after the mitigation activity is completed from the risk that existed before the mitigation activity occurred. The electrical corporation is then to divide the risk difference by the risk before the mitigation activity, and finally, multiply the divided number by 100.[48]

[47] EC ARC, Appendix A, pages 1-5; IE ARC, pages 186-190; and Appendix A.
[48] WMP Technical Guidelines, page 71.

When accounting for the amount of risk targeted for removal by an initiative, SDG&E's ten missed initiatives impacted the planned risk to be removed (Table 3). The 2023 WMP does not define the total risk that applies to the stated percentage risk reduction. For example, the 2023 WMP does not clarify if the planned risk reduction of 4.8% due to undergrounding of electric lines would lead to a 4.8% reduction of total system-wide risk, a 4.8% reduction of total risk at a given circuit or region, or a 4.8% reduction of some other form of spatial or temporal risk.

As a result, this ARC does not assume the nature of the estimated risk that was to be reduced by these not attained initiatives. Rather, Energy Safety observes that the not attained initiatives did not achieve their intended risk reduction and calculates the actual reduction in risk using the percentage of completed work as a proxy for actual reduced risk.

Table 3. Not Attained 2023 WMP Initiatives % Risk Impact Removed

Not Attained 2023 WMP Initiative Name and Tracking IDs	% Risk Impact 2023 WMP[49]	% of WMP Initiative Complete	% Risk Removed
Undergrounding of Electric Lines and/or Equipment 8.1.2.2 WMP.473	4.8%	83%	4%
Advanced Protection 8.1.2.8.1 WMP.463	0.6%	80%	0.5%
Early Fault Detection 8.1.2.8.2 WMP.1195	2.6%	53%	1.4%
Distribution Communications Reliability Improvements 8.1.2.8.3 WMP.549	N/A (no risk reduction anticipated)	N/A (no risk reduction anticipated)	N/A (no risk reduction anticipated)
Strategic Pole Replacement Program 8.1.2.10.2 WMP.1189	0.1%	1.7%	0%

[49] 2023 WMP, pages 145-148.

Not Attained 2023 WMP Initiative Name and Tracking IDs	% Risk Impact 2023 WMP[49]	% of WMP Initiative Complete	% Risk Removed
Transmission Overhead Detailed Inspections 8.1.3.2 WMP.479	1.5%	81%	1.2%
Expulsion Fuse Replacement Program 8.1.4.4 WMP.459	0.1%	90%	0.1%
QA/QC Distribution Detailed Inspections 8.1.6.2 WMP.491	N/A (no risk reduction anticipated)	N/A (no risk reduction anticipated)	N/A (no risk reduction anticipated)
Wood and Slash Management 8.2.3.2 WMP.497	N/A (no risk reduction anticipated)	N/A (no risk reduction anticipated)	N/A (no risk reduction anticipated)
Air Quality Index (AQI) Sensor – Installation 8.3.2.1.3 WMP.970	N/A (no risk reduction anticipated)	N/A (no risk reduction anticipated)	N/A (no risk reduction anticipated)

6. Ignition Risk, Outcome Metrics, and Inspections

Energy Safety assessed the performance of SDG&E's infrastructure relative to its wildfire risk, as measured by changes in the occurrence of events that correlate to wildfire risk.

Energy Safety requires electrical corporations to report data, such as ignitions, that help Energy Safety assess whether an electrical corporation reduced its wildfire risk while also reducing its reliance on PSPS events. For 2023, Energy Safety assessed each electrical corporation's infrastructure performance for the calendar years 2016 through 2023 with particular attention on the 2023 outcomes.

The collection of metrics evaluated are grouped into two categories: ignition risk metrics, and outcome metrics. A list of all the metrics in each category is described fully in their respective following sections. For these sections, Energy Safety relied on data reported in the third quarter 2022 QDR for the 2016 through 2021 values, the fourth quarter 2023 QDR for the 2022 values, and DR-280 response for the 2023 values.[50,51]

Normalizing Metrics

For applicable performance metrics, the normalizing metrics Energy Safety uses are: "Overhead Circuit Miles" (OCM), "High Wind Warning Overhead Circuit Mile Days" (HWWOCMD), and "Red Flag Warning Overhead Circuit Mile Days" (RFWOCMD). To see the values for each year used, see Appendix C, Figure 18 through Figure 26.

Energy Safety uses these normalizing metrics to ensure a more nuanced interpretation of wildfire risk outcomes. For example, the outcome metric of "acres burned" may be impacted by the presence of hot, dry winds and, thus, this metric is presented in both raw counts and normalized by RFWOCMD. In this way, the acres burned are presented accounting for year-by-year variances in weather conditions that may influence the outcome.

Findings

Ignition risk and outcomes metrics findings include:

- The overall ignition counts continued to decline from 2016 through 2023.
- When adjusting ignitions for OCMs, HFTD Tier 3 has shown a higher rate when compared to other tiers.

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[50] The format of the required data reporting for all electrical corporations changed near the end of 2022, thus, all data for 2016-2021 were obtained from the third quarter 2022 QDR (old format). Data for 2022 and forward were obtained from the fourth quarter QDR (new format) of each year as well as DR-280 Response.
[51] 2022 Q3 QDR, 2023 Q4 QDR, and DR-280 Response.

- The primary drivers for ignitions were object contact and facility or equipment failures.
- Outage events remain consistent from 2022 to 2023 in non-HFTD, HFTD Tier 2 and HFTD Tier 3 areas.
- The primary drivers for outage events were object contact, facility or equipment failures, and other.
- SDG&E's ignitions continue to decline without use of PSPS events in 2023.
- Outcome metrics such as acres burned, injuries and fatalities, structures damaged or destroyed, and value of assets lost continue to be negligible in recent years.

6.1 Ignition Risk Metrics

Energy Safety reviewed the following metrics associated with ignition risk:

1. *Ignitions* – Incidents in which electrical corporation infrastructure was involved in an ignition,
2. *Wire Down Events* – Incidents in which overhead electrical lines fall to the ground, land on objects, or become disconnected from their moors,
3. *Unplanned Outages* – All unplanned outages experienced, and
4. *PSPS Events* – Planned outages called PSPS events.

6.1.1 Ignition Data Analysis

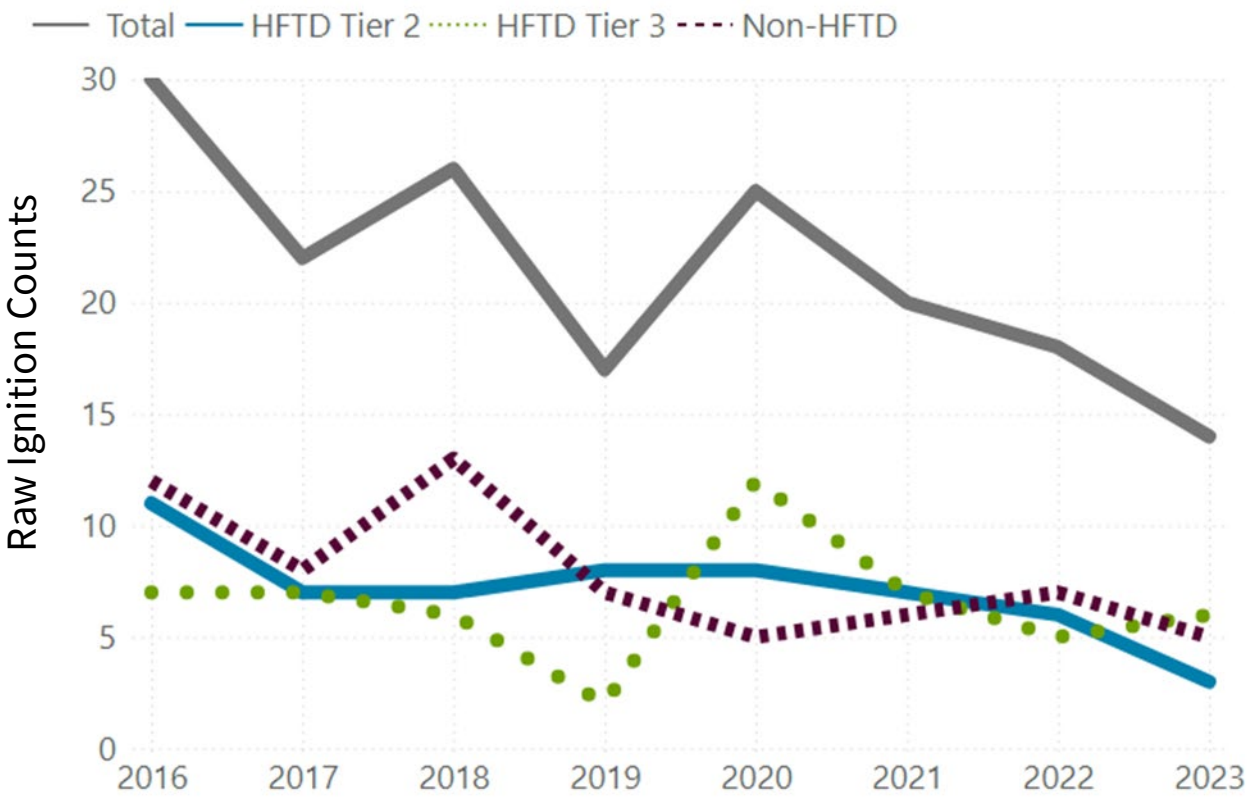
The ignition data analysis section examines ignitions stemming from distribution and transmission lines with particular attention paid to HFTD Tier 2 and HFTD Tier 3 areas.[52] In addition to showing raw ignition counts, ignitions are normalized by OCM, HWWOCMD, and RFWOCMD. SDG&E's service territory is divided into three primary area designations: non-HFTD, HFTD Tier 2, and HFTD Tier 3. For a sense of scale, the percentage of OCM for each territory type is as follows: non-HFTD = 45%, HFTD Tier 2 = 31%, and HFTD Tier 3 = 24%.[53]

Raw Ignition Counts

The overall raw ignition counts vary across the years but show a general decline from 2016 to 2023 (Figure 1). The division of ignitions across HFTD tiers appears to be about equal. This is notable since the HFTD Tier 3 area contained approximately one-third of all ignitions during this time but only comprised 24% of the OCM.

[52] 2022 Q3 QDR, Table 7.2; 2023 Q4 QDR, Table 6.
[53] 2022 Q3 QDR, Tables 6 and 8; 2023 Q4 QDR, Tables 4 and 7.

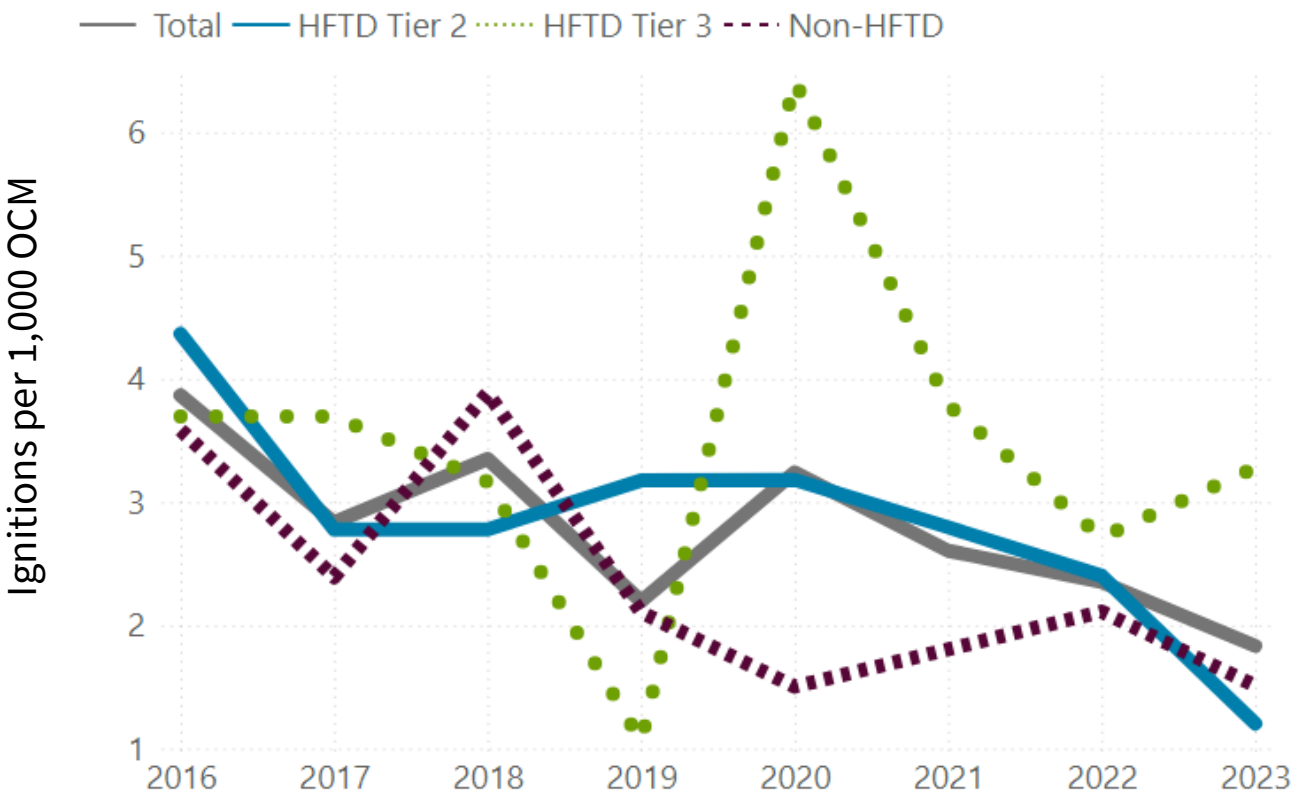
Figure 1. SDG&E Ignition Counts (2016-2023) by HFTD Tier



Ignitions Normalized by Overhead Circuit Miles

To account for concurrent grid expansion within the territory and allow for comparisons with other utilities, ignitions normalized by overhead circuit miles (OCM) are provided and delineated by HFTD Tier 3, HFTD Tier 2, and non-HFTD Areas. The normalized ignitions correspond with the raw counts in that ignitions generally declined between 2020 to 2023. The large spike in HFTD Tier 3 for the year 2020 stems from the spike in raw ignitions but is enhanced as it is adjusted for the relatively fewer circuit miles in that tier (Figure 2).

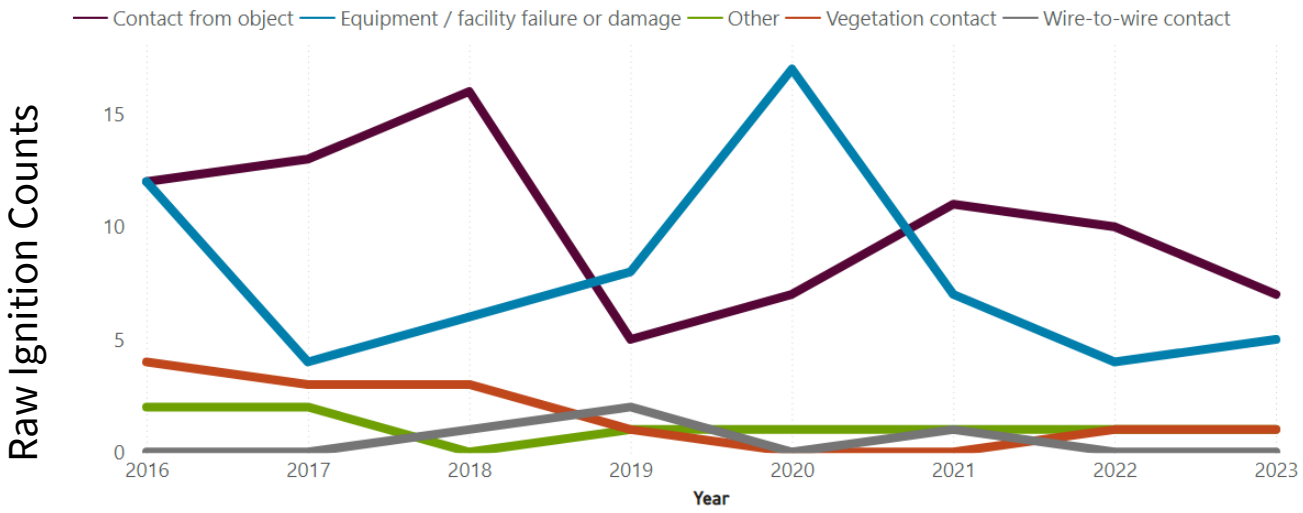
Figure 2. SDG&E Ignitions Normalized by OCM (2016-2023) by HFTD Tier



Ignition Counts Delineated by Risk Driver

SDG&E ignition events are primarily caused by equipment or facility failure and contact from objects. Both of these main drivers show fewer ignitions in 2023 compared to 2016, with some variability in intervening years (Figure 3).

Figure 3. SDG&E Ignition Counts (2016-2023) by Risk Driver



Ignition Counts Normalized by High Wind Warning Overhead Circuit Mile Days and Red Flag Warning Overhead Circuit Mile Days

To see ignitions by HFTD tier area normalized by HWWOCMD and RFWOCMD, see Appendix C (Figure 21 and Figure 22).

6.1.2 Wire Down Events Data Analysis

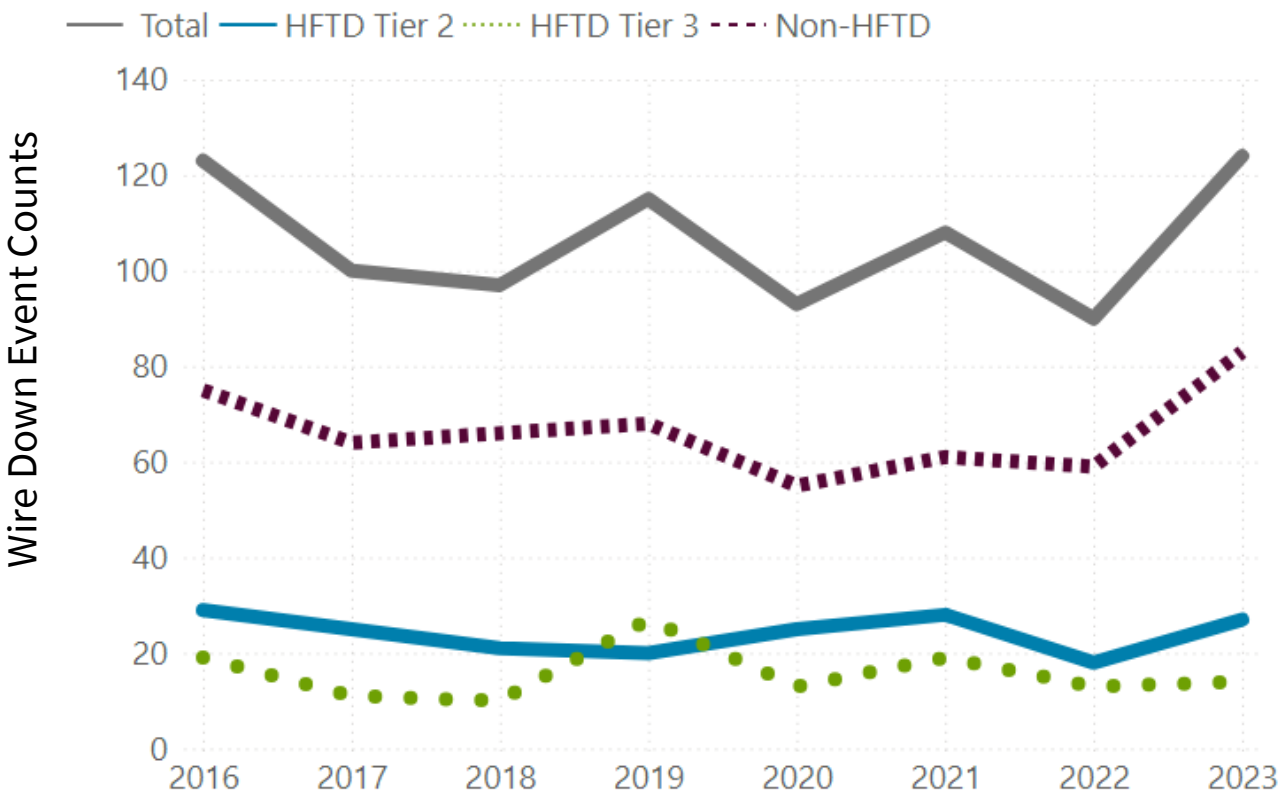
Wire down events are wildfire risks where a wire is touching the ground, touching an object, or has become disconnected from its mooring. This type of event poses a risk of ignition or a danger to people if that wire is also energized with electricity. The data sources for wire down information are the QDRs.[54]

Raw Wire Down Events

The wire down event counts for SDG&E exhibit only slight fluctuations between 2016 and 2023, with a recent increase in counts for 2023. The largest number of wire down events are consistently in the non-HFTD area, which is the least risky with respect to wildfires (Figure 4).

[54] 2022 Q3 QDR, Table 7.1; 2023 Q4 QDR, Table 5.

*Figure 4. SDG&E Wire Down Event Counts (2016-2023) by HFTD Tier **

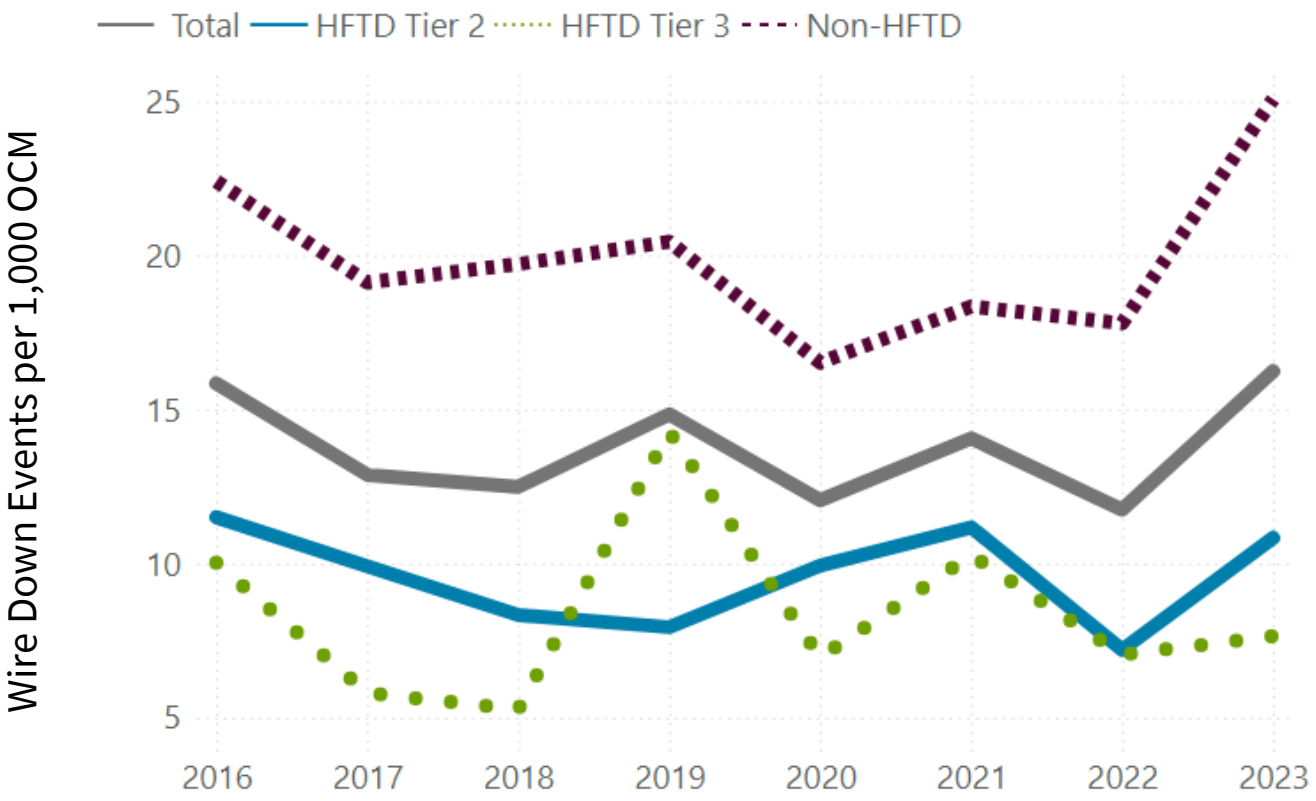


*Values for 2016 and 2017 may not match those reported in Energy Safety's 2022 ARC due to updates in reporting since the 2022 ARC was published.

Wire Down Events Normalized by Overhead Circuit Miles

When accounting for OCMs, the wire down rates for HFTD Tier 2 and Tier 3 areas remain generally consistent over time, with some variation (Figure 5).

Figure 5. SDG&E Wire Down Events Normalized by OCM (2016-2023) by HFTD Tier



Wire Down Events Normalized by High Wind Warning Overhead Circuit Mile Days and Red Flag Warning Overhead Circuit Mile Days

Please see Appendix C (Figure 23 and Figure 24) for wire down events normalized by HWWOCMD and RFWOCMD.

6.1.3 Outage Event Data Analysis

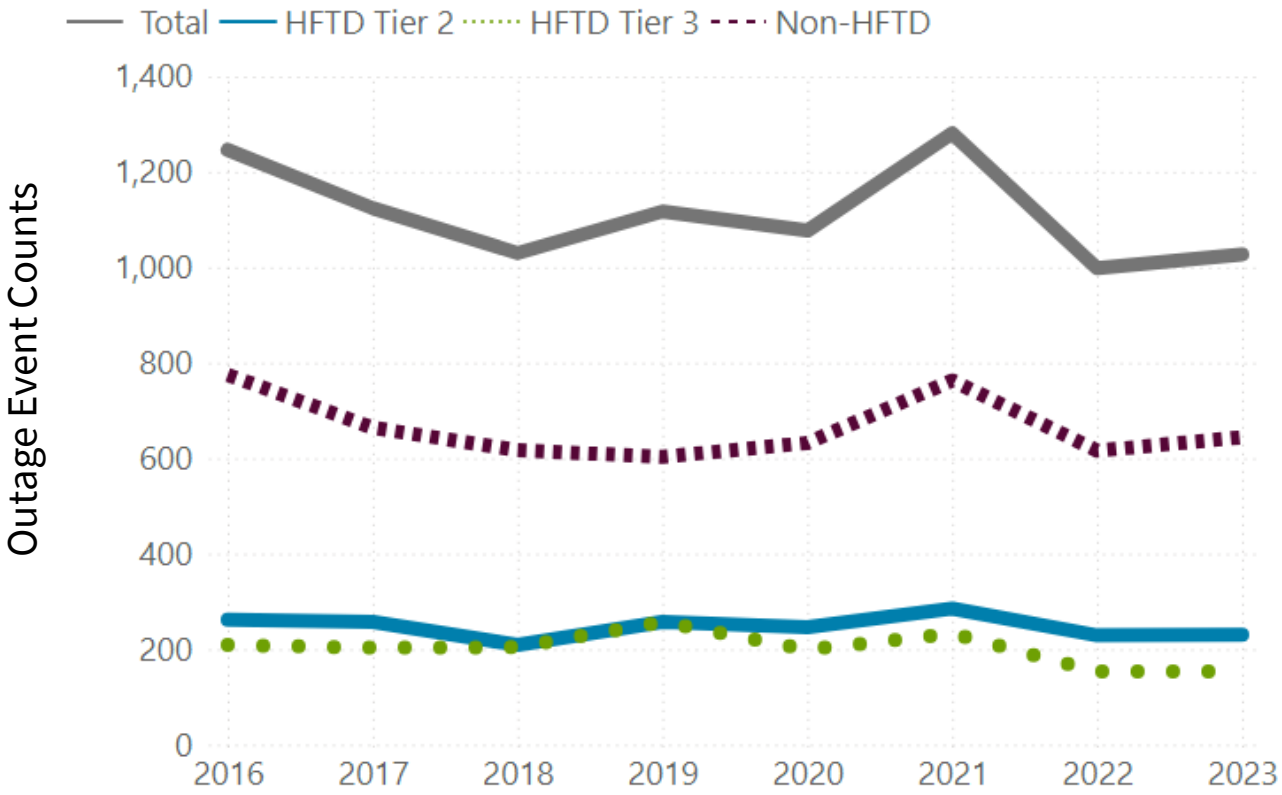
Power outages (outages) are unplanned power outage events (does not include PSPS events) tabulated by circuits and not by number of customers impacted. Outage events are tracked as outcomes that may both cause ignitions and impact customer's quality of life. The data sources for outage events are the QDRs.[55]

[55] 2022 Q3 QDR, Table 7.1; 2023 Q4 QDR, Table 5.

Raw Outage Event Counts

Total unplanned outage event counts have been generally constant between 2016 and 2023, with some slight fluctuations year-to-year. The raw counts decreased slightly in 2022. Non-HFTD area outage events make up most of the total (Figure 6).

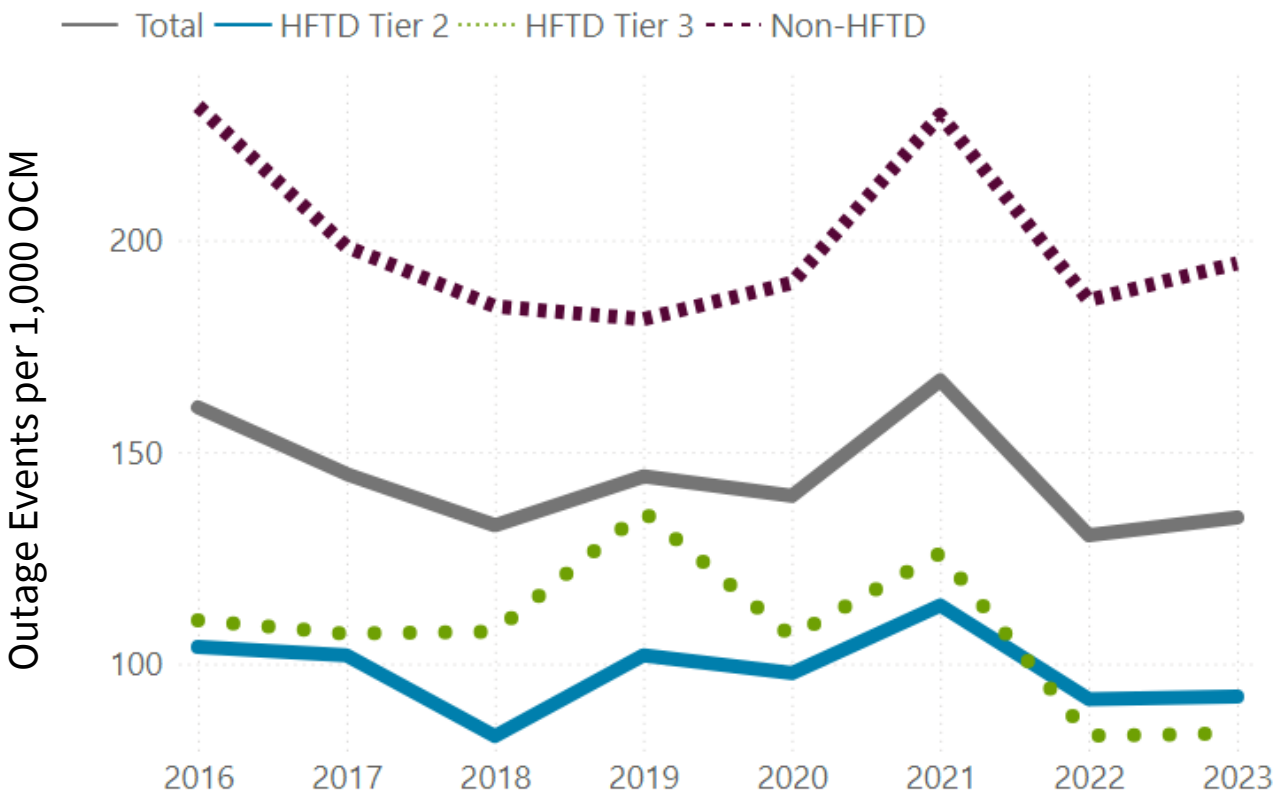
Figure 6. SDG&E Outage Events (2016-2023) by HFTD Tier



Outage Events Normalized by Overhead Circuit Miles

To see if the high rate of outage events in non-HFTD areas is explained by the larger number of line miles there, the events are normalized by OCM (Figure 7). When accounting for the number of line-miles in each area, the lower wildfire risk areas continue to have a higher rate of outages.

Figure 7. SDG&E Outage Events Normalized by OCM (2016-2023) by HFTD Tiers

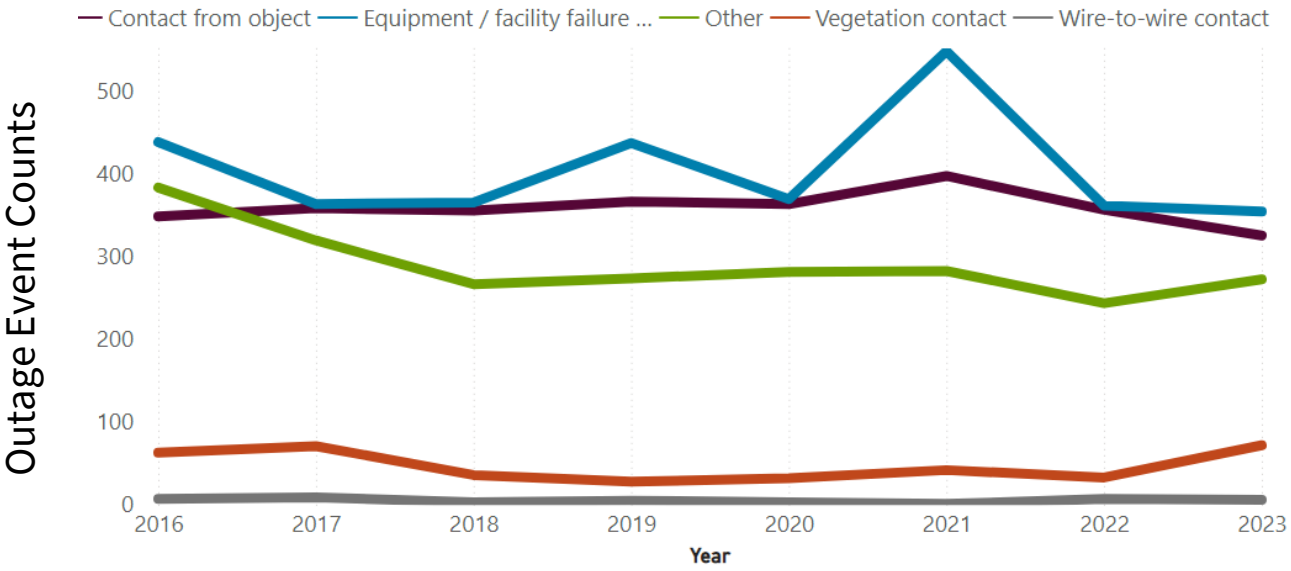


Outage Events Delineated by Risk Driver

To show which causes are the largest contributors to unplanned outage events, the outage event counts are broken out by risk drivers and shown relative to each other (Figure 8). SDG&E outage events are primarily caused by equipment or facility failure, contact from object, and “other”. Comparatively, vegetation and wire-to-wire contact outages occur at much lower frequencies.[56] The counts of outage events by each risk driver remain consistent from 2016 to 2023 (Figure 8).

[56] "Other” risk drivers for outages include, but are not limited to, vandalism, theft, lightning, contamination, and emergency repairs.

Figure 8. SDG&E Outage Events (2016-2023) by Risk Driver



Outage Events Normalized by High Wind Warning Overhead Circuit Mile Days and Red Flag Warning Overhead Circuit Mile Days

Please see Appendix C (Figure 25 and Figure 26) for outage events normalized by HWWOCMD and RFWOCMD.

6.1.4 Public Safety Power Shutoff Event Data Analysis

PSPS events are planned outages used as a wildfire mitigation tool during extreme fire conditions such as hot, dry, and windy days. While useful as a wildfire mitigation measure, PSPS events carry their own risks and adverse impacts on customers – particularly vulnerable customers who need electricity to survive. As such, electrical corporations take mitigating actions to reduce the frequency, scope, duration, and impacts of PSPS events.

As PSPS events are typically implemented during extreme fire conditions, the PSPS outcomes are presented first in raw count form and then normalized by RFWOCMD to account for variances in weather across years.

The following four PSPS event parameters are presented by year and comprise the PSPS event data analysis:

- *Frequency* is measured as the number or count of all PSPS events,
- *Scope* is measured as the total number of utility circuits impacted because of all PSPS events,
- *Duration* is measured by the total number of customer-hours because of all PSPS events,

- *Impacts - Customers* is measured as the total number of customers affected by all PSPS events, and
- *Impacts - Critical Infrastructure* is measured as the total number of critical infrastructure hours affected by all PSPS events.

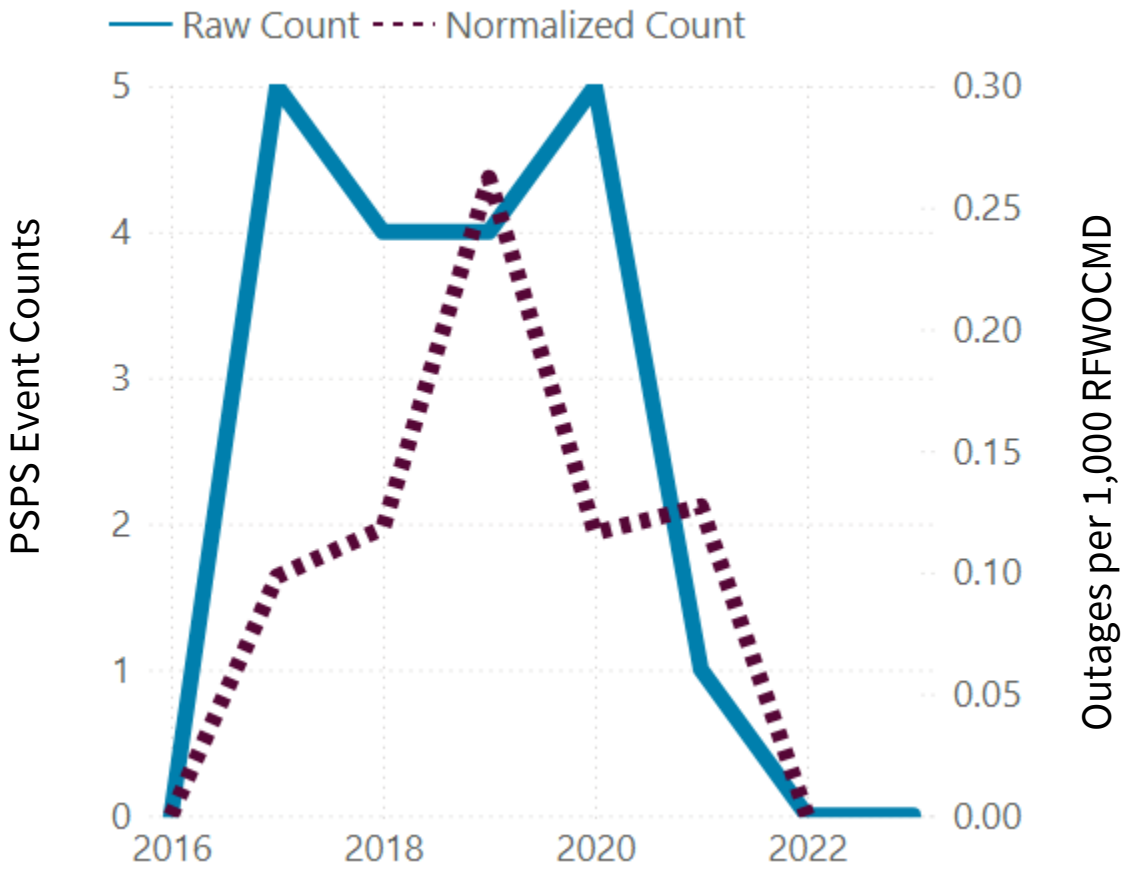
The data source for PSPS events information is the QDRs.[57]

Frequency of PSPS Events

The number of PSPS events on SDG&E's system increased from zero in 2016 to five in 2017, with slight fluctuations through 2021. In 2022, the number of PSPS events returned to zero and remained at zero into 2023. PSPS events adjusted for the weather show a peak in 2019, with a general decrease since then (Figure 9). There were zero RFWOCMDs in 2023, resulting in a null value for the normalized count, and as a result Energy Safety does not display a normalized count datum for the year 2023 in the figure below.[58]

[57] 2022 Q3 QDR, Table 11; 2023 Q4 QDR, Table 10.
[58] DR-OEIS-C-ARC-2023-SDGE-016 Response for updated HWWOCMD and RFWOCMD values.

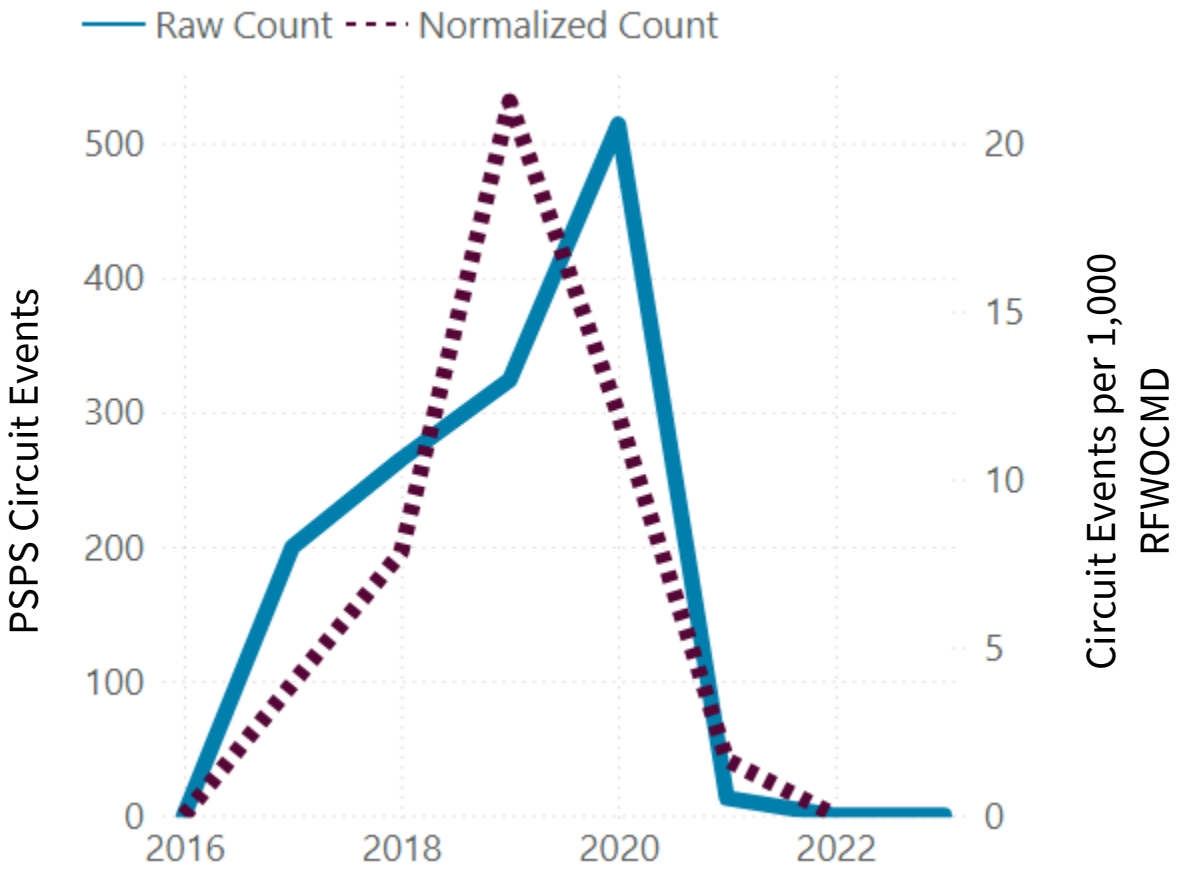
Figure 9. SDG&E PSPS Events Frequency and Frequency Normalized by RFWOCMD (2016-2023)



Scope of PSPS Events

The number of utility circuits impacted by PSPS events reached its highest point in 2020 and declined to zero in 2022, which continued in 2023. When accounting for yearly weather variances, the highest point occurred in 2019, with a general decline since then (Figure 10). There were zero RFWOCMDs in 2023, resulting in a null value for the normalized count, and as a result Energy Safety does not display a normalized count datum for the year 2023 in the figure below.

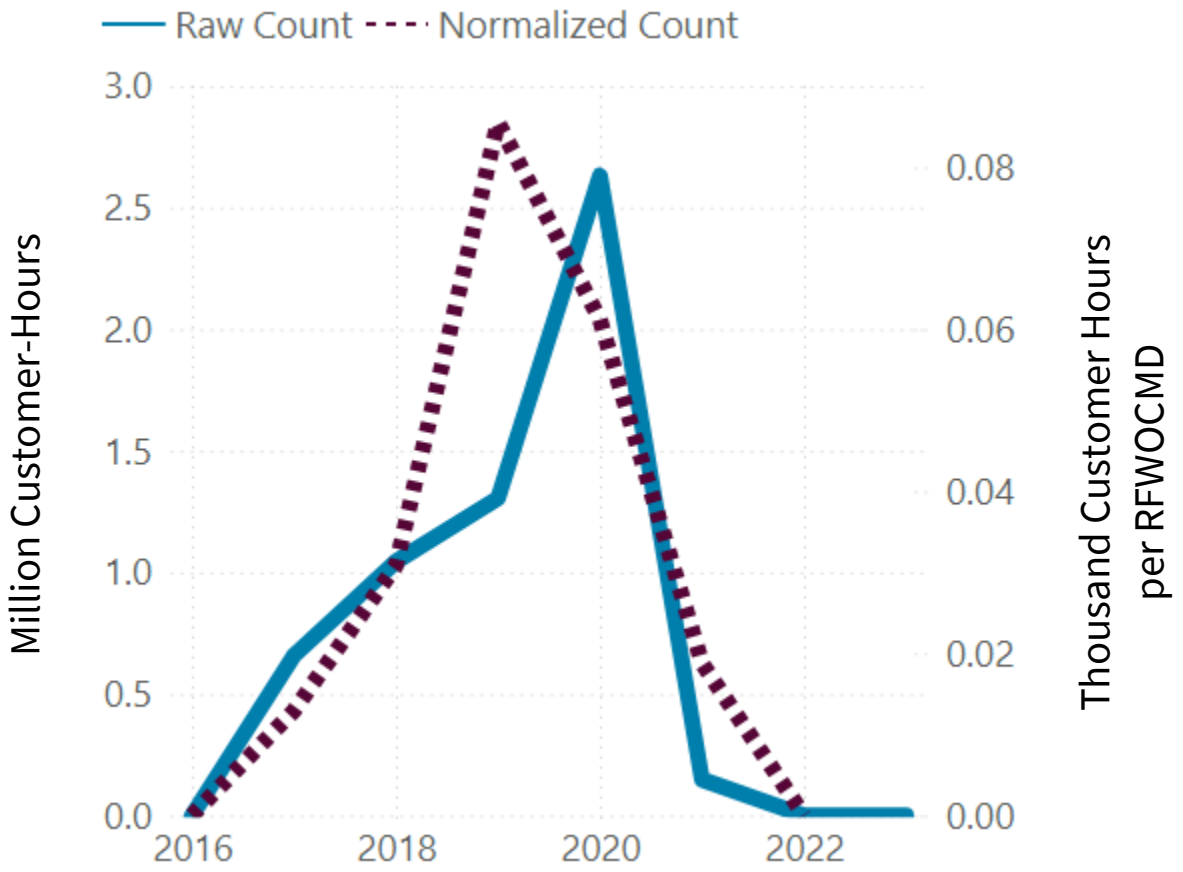
Figure 10. SDG&E PSPS Event Scope and Event Scope Normalized by RFWOCMD (2016-2023)



Duration of PSPS Events

The total number of customer-hours impacted by all PSPS events for each year shows a high point in 2020, with a subsequent decrease in 2021 thereafter with zero values in 2022 and 2023. When accounting for yearly changes in weather, the normalized customer-hours show a similar tendency with the highest value in 2019, with a decrease in 2020 continuing to zero in 2022 and 2023 (Figure 11). The zero RFWOCMDs in 2023 resulted in a null value for the normalized count, and as a result Energy Safety does not display a normalized count datum for the year 2023 in the figure below.

Figure 11. SDG&E PSPS Event Duration and Duration Normalized by RFWOCMD (2016-2023)



Impacts of PSPS Events

The impacts of PSPS events on customers reached its highest value in 2020 with a subsequent decrease thereafter with zero events in 2022 and 2023 (Figure 12). For the event impacts on critical infrastructure, the figure is similar (Figure 13). When accounting for yearly changes in weather, the normalized impacts of PSPS event impacts also show similar results as compared to Figure 12. There were zero RFWOCMDs in 2023, resulting in a null value for the normalized count, and as a result Energy Safety does not display a normalized count datum for the year 2023 in the figures below.

Figure 12. SDG&E PSPS Event Impacts on Customers and Event Impacts on Customers Normalized by RFWOCMD (2016-2023)

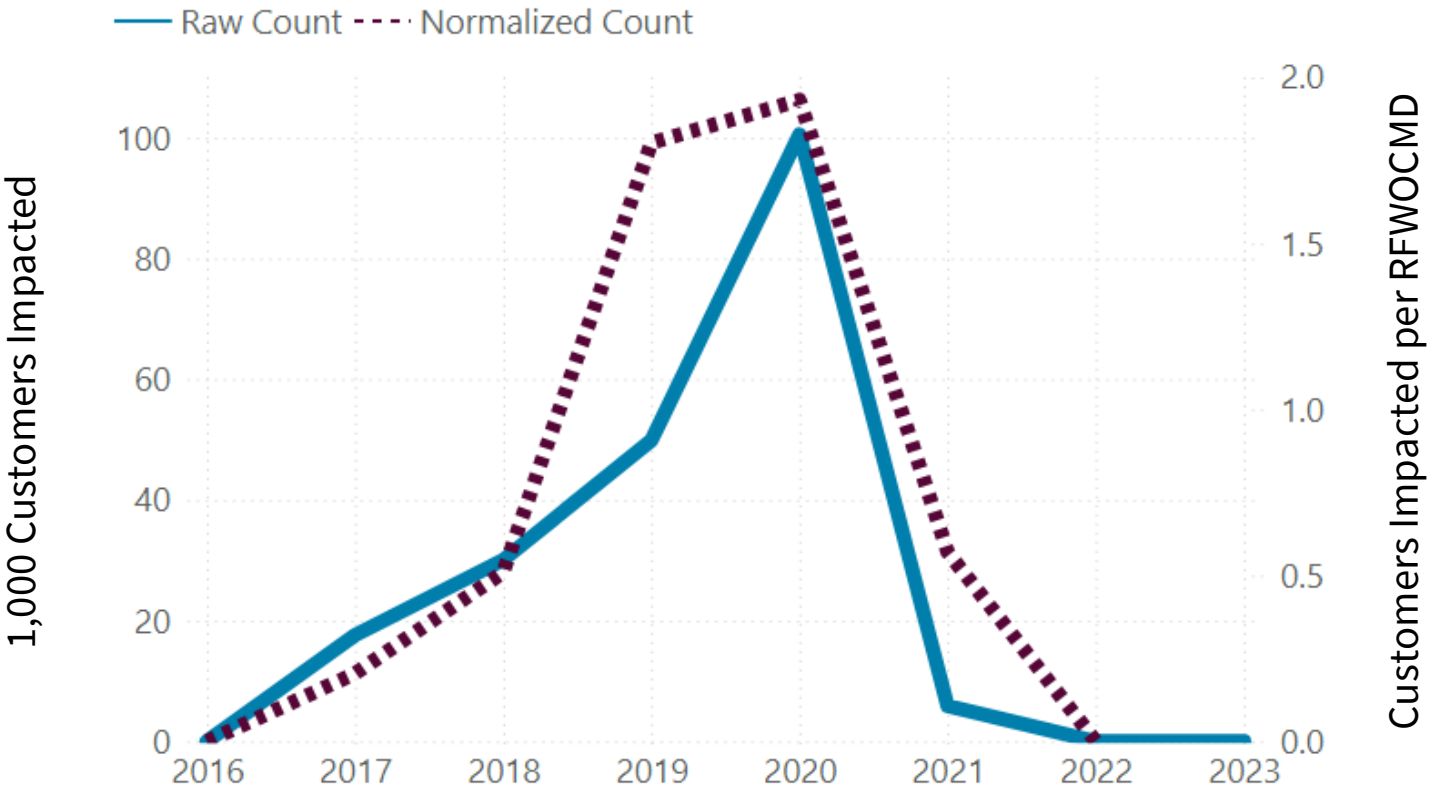
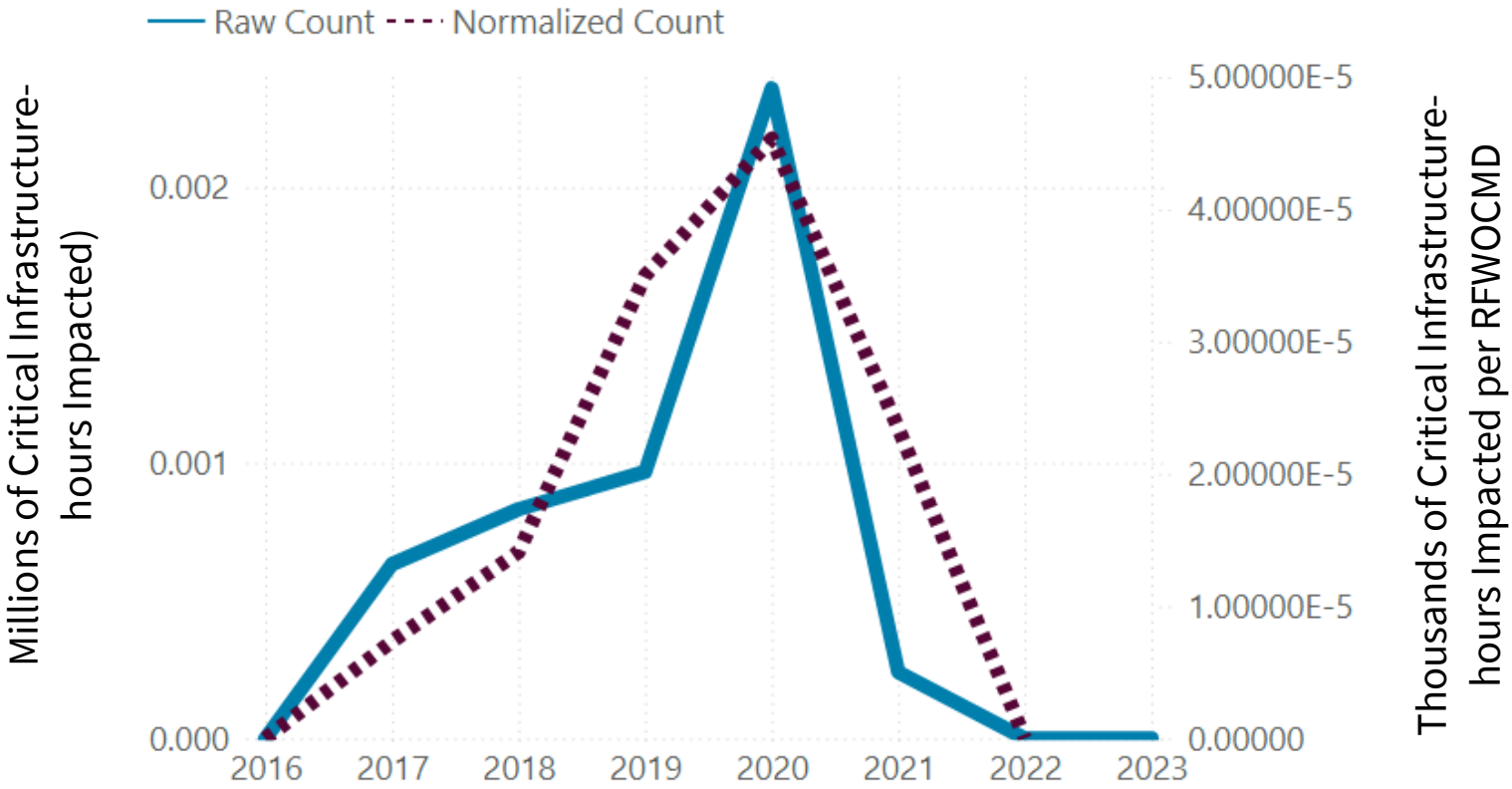


Figure 13. SDG&E PSPS Event Impacts on Critical Infrastructure and Event Impacts on Critical Infrastructure Normalized by RFWOCMD (2016-2023)



6.2 Outcome Metrics

This section presents outcome metrics on electrical corporation-related wildfires including:

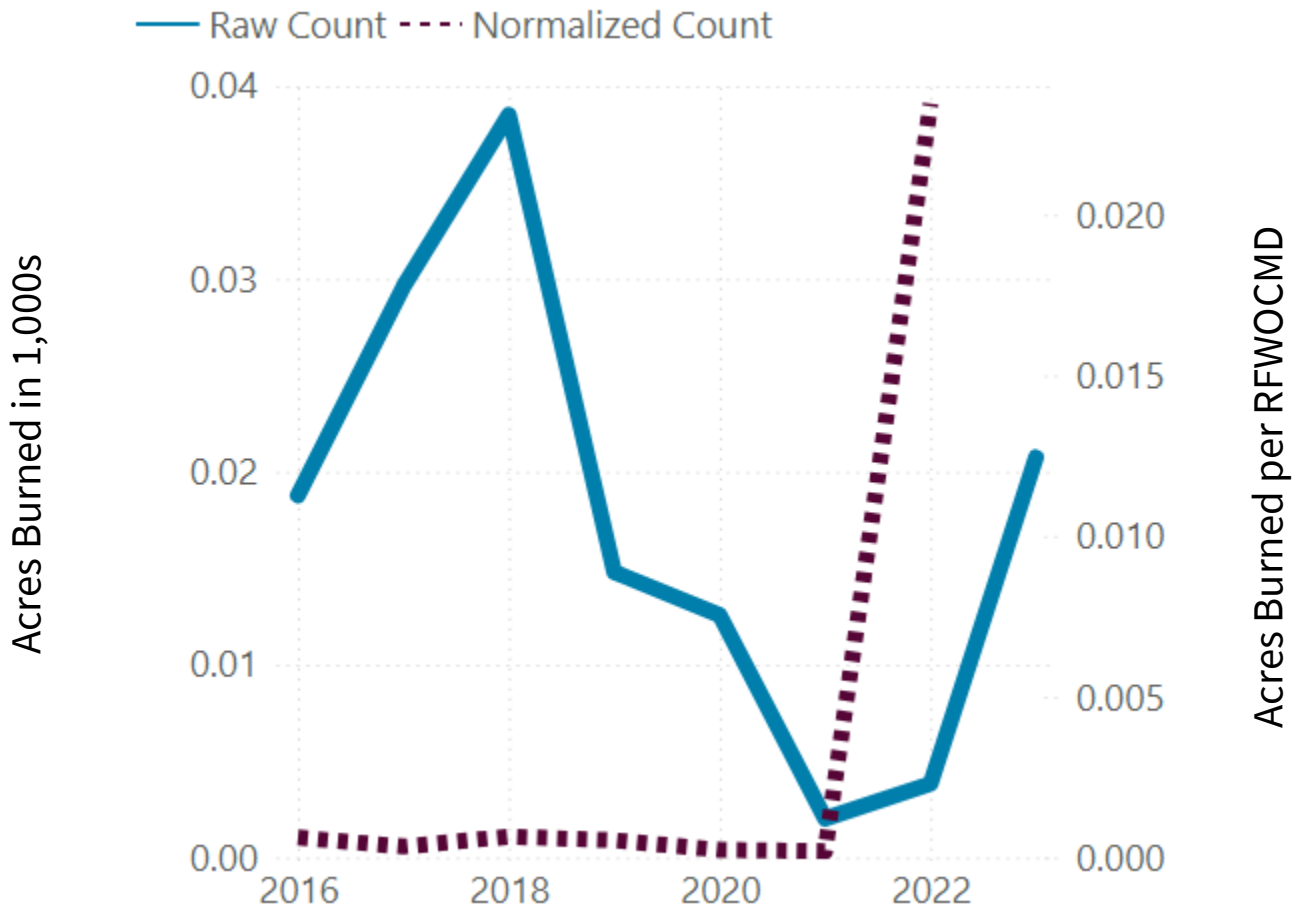
1. *Acres burned* – The total number of acres burned due to electrical corporation caused fires,
2. *Structures damaged/destroyed* - The total number of structures damaged or destroyed due to electrical corporation caused fires,
3. *Injuries/fatalities* - The total number of injuries and fatalities due to electrical corporation caused fires,
4. *Value of assets destroyed* - The total value of assets destroyed due to electrical corporation caused fires.

The data sources for outcomes metrics information are the QDRs.[59]

Acres Burned

The total number of acres burned by SDG&E-ignited wildfires was highest in 2018 and lowest in 2021. However, the year-to-year changes are not as large as they appear in the figure below as values range between almost zero and less than 40 acres. There were zero RFWOCMDs in 2023, resulting in a null value for the normalized count, and as a result Energy Safety does not provide a normalized count datum for the year 2023 (Figure 14).[60]

Figure 14. SDG&E Total Acres Burned and Total Acres Burned Normalized by RFWOCMD (2016-2023)



[59] 2022 Q3 QDR, Table 2; 2023 Q4 QDR, Table 2.
[60] DR-OEIS-C-ARC-2023-SDGE-016 Response for updated HWWOCMD and RFWOCMD values.

Structures Damaged or Destroyed

An SDG&E-ignited wildfire in 2018 damaged or destroyed one structure. No structures were damaged or destroyed in the other years including 2023. Given that the number of structures damaged or destroyed has been zero for most years, normalizing by RFWOCMD does not provide any new insights.[61]

Injuries and Fatalities

There were no injuries or fatalities reported from 2016 through 2023. Given that the number of injuries or fatalities has been zero for the period, normalization by RFWOCMDs does not provide any new insights.[62]

Value of Destroyed Assets

The value of the assets damaged or destroyed by SDG&E-ignited wildfires in 2018 was $2,900. As no other years are reported as having damaged or destroyed structures, the value of destroyed assets is reported as zero for all other years including 2023. Given that the SDG&E number reported of structures damaged or destroyed has been zero most years, normalizing by RFWOCMD does not provide any new insights.[63]

6.3 Energy Safety Field Inspection Analysis

Energy Safety performs inspections utilizing an electrical corporation's initiative activity data applicable to the WMP year compliance period. Energy Safety conducts two types of inspections: 1) inspections of grid hardening and other work related to WMP initiatives related to physical infrastructure, and 2) inspections of general wildfire safety conditions at an inspection site. The second category of general wildfire safety conditions is not strictly related to WMP initiatives, and these inspections are additional to Energy Safety's WMP initiative-related inspection work.[64]

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[61] *See* DR-OEIS-C-ARC-2023-SDGE-016 Response for updated HWWOCMD and RFWOCMD values.
[62] *See* DR-OEIS-C-ARC-2023-SDGE-016 Response for updated HWWOCMD and RFWOCMD values.
[63] *See* DR-OEIS-C-ARC-2023-SDGE-016 Response for updated HWWOCMD and RFWOCMD values.
[64] If Energy Safety observes a general wildfire safety concern during an inspection activity, then that is recorded as a "Wildfire Safety Concern." Or as it was known prior to 2024, a "defect." If Energy Safety observes noncompliance with a WMP initiative during an inspection activity that an electrical corporation claimed to have occurred at a site, then that is recorded as a "violation." For example, if Energy Safety is inspecting a particular utility pole and looking for eight different conditions associated with a WMP initiative, then that would count as eight WMP inspection activities. If a general wildfire safety inspection occurs at the same time at that utility pole, and 20 general wildfire safety concerns are assessed, then that would count as 20 general wildfire safety inspection activities. In this example, a single utility pole inspection would lead to a total of 28 inspection activities.

For the 2023 compliance period, Energy Safety conducted 8,020 general wildfire safety (GWS) inspection activities and 1,278 WMP inspection activities in SDG&E's territory. No Notices of Violation or Notices of Defect were issued to SDG&E in 2023.

6.4 Energy Safety Analysis of Reporting Accuracy and Completeness

Reports required by Public Utilities Code section 8386 are intended to inform Energy Safety of electrical corporations' compliance with its wildfire mitigation plan initiative activities. This section considers whether SDG&E exhibited issues related to its execution, management, or documentation in the implementation of its 2023 WMP. To accomplish this, Energy Safety undertook a holistic evaluation of all relevant information sources and assessments, including field verifications, for any systemic failings that may have hindered SDG&E's ability to reduce the risk of igniting a catastrophic wildfire.

Energy Safety found minor issues in SDGE's execution, management, and documentation of its WMP work in 2023. These issues included the following:

- Covered Conductor Installation (WMP.455) was reported with a completion of 78.76 miles in the QDR compared to the 60 miles reported in the EC ARC.
- QA/QC of Transmission Inspections (WMP.1191) was reported to have completed a percentage target in the QDR, compared to a quantitative target in the EC ARC.
- Air Quality Index Sensor – Installation (WMP.970) reported five sensors installed in the QDR compared to the reported six installed in the EC ARC.

Energy Safety did not find any systemic issues that hindered SDG&E's ability to adequately implement its WMP in 2023. An analysis of SDG&E's performance in 2023 revealed that SDG&E was largely successful in managing and documenting its data.

7. Conclusion

SDG&E completed 38 of 48 (or 79%) of its 2023 WMP initiatives. However, SDG&E failed to meet its commitments for 10 of its WMP initiatives for 2023, including two of the 10 initiatives with the largest planned expenditures.

The total amount budgeted for the 10 not attained initiative activities was $298 million, or 47% of the approximate $630 million allocated in the 2023 WMP budget. Of the 10 largest initiatives by budgeted amount, two were not attained and represented a budgeted amount of $279 million, or 49%, of the $569 million allocated for these 10 initiatives in 2023. When accounting for the partial amount that was spent on incomplete initiative activities, $276 million of the original budgeted amount of $298 million for these initiative activities was spent (93% of the budget). In consideration of the overall 2023 WMP budget, SDG&E spent

below the planned amounts on its 2023 WMP initiatives by $2.7 million or 0.1% of the overall budget.

Ignition risk and outcomes metrics findings include:

- The overall ignition counts continued to decline from 2016 to 2023.
- When adjusting for OCMs, the HFTD Tier 3 showed a higher ignition rate when compared to the other tiers beginning in 2019 to 2023.
- The primary drivers for ignitions were object contact and facility or equipment failures.
- Outage events remained consistent from 2022 to 2023 in non-HFTD, HFTD Tier 2 and HFTD Tier 3 areas.
- The primary drivers for outage events were object contact, facility or equipment failures, and other.
- SDG&E's ignitions continued to decline without use of PSPS events in 2023.
- Outcome metrics such as acres burned, injuries and fatalities, structures damaged or destroyed, and value of assets lost, were negligible in recent years.

Energy Safety did not find any systemic issues that hindered SDG&E's ability to adequately implement its WMP in 2023. An analysis of SDG&E's performance in 2023 revealed that SDG&E was largely successful in managing and documenting its data.

Energy Safety acknowledges that in 2023 SDG&E undertook efforts to reduce its wildfire risk, and in many instances achieved its WMP initiative activity targets. Energy Safety found that SDG&E's 10 missed targets did not materially hinder SDG&E's ability to mitigate its wildfire risk.

On balance, SDG&E was largely successful in executing its plan for wildfire risk mitigation. While Energy Safety acknowledges that SDG&E achieved its overarching objectives, there are still areas for improvement and continued learning. Energy Safety will continue to monitor SDG&E's implementation of its ongoing wildfire mitigation activities and compel SDG&E to improve its ability to eliminate utility-caused catastrophic wildfires in California.

8. References

Table 4. Full References for Citations

Citation	Reference
2022 Q3 QDR	San Diego Gas & Electric Company, 2022-11-01_SDGE_2022 Quarterly Data Report Non-Spatial Data, November 1, 2022, URL: https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53185&shareable=true.
2023 Q4 QDR	San Diego Gas & Electric Company, 2024-02-01_SDGE_2023_QDR_R0_Cover Letter, February 1, 2024. Available: https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56307&shareable=true/.
2023 WMP	San Diego Gas & Electric Company, 2023-2025 Wildfire Mitigation Plan, October 23, 2023, URL: https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55859&shareable=true.
Compliance Guidelines	Office of Energy Infrastructure Safety, Compliance Guidelines, September 2023, URL: https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55586&shareable=true.
Compliance Process	Office of Energy Infrastructure Safety, Compliance Process, September 2024, URL: https://energysafety.ca.gov/wp-content/uploads/2024/12//2024-wmp-compliance-process.pdf.
DR-280 Response	San Diego Gas & Electric Company, DR-280 Response, November 2024, unpublished.
DR-OEIS-C-ARC-2023-SDGE-016 Response	San Diego Gas & Electric Company, DR-OEIS-C-ARC-2023-SDGE-016 Response, April 2025, unpublished.

Citation	Reference
EC ARC	San Diego Gas & Electric Company, 2023 Wildfire Mitigation Plan Annual Report on Compliance, April 1, 2024, URL: https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=56432&shareable=true.
IE ARC Comments	San Diego Gas & Electric Company, SDG&E Comments to Independent Evaluator 2023 WMP Annual Report on Compliance, August 30, 2024, URL: https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57310&shareable=true.
IE ARC	Bureau Veritas, Final Independent Evaluator 2023 Annual Report on Compliance, June 30, 2024, URL: https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57100&shareable=true.
Pub. Util. Code	Public Utilities Code, URL: https://leginfo.legislature.ca.gov/faces/codesTOCSelected.xhtml?tocCode=PUC&tocTitle=+Public+Utilities+Code+-+PUC.
PRC, Section 4292	Public Resource Code Section 4292, California Code, PRC 4292, URL: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=4292.
SVM Audit	Office of Energy Infrastructure Safety, 2023 Substantial Vegetation Management Audit, December 2024, URL: https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57786&shareable=true.
SVM Audit Corrective Action Plan	San Diego Gas & Electric Company, SDG&E 2023 SVM Corrective Action Plan, January 31, 2025, URL: https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=57902&shareable=true.
SVM Audit Report	Office of Energy Infrastructure Safety, SDG&E 2023 SVM Audit Report, April 21, 2025, URL: https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=58303&shareable=true.

Citation	Reference
WMP Decision	Office of Energy Infrastructure Safety, Decision on SDG&E's 2023-2025 Wildfire Mitigation Plan, October 13, 2023, URL: https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=55782&shareable=true.
WMP Technical Guidelines	Office of Energy Infrastructure Safety, 2023-2025 WMP Technical Guidelines, January 7, 2022, URL: https://efiling.energysafety.ca.gov/eFiling/Getfile.aspx?fileid=53286&shareable=true.

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APPENDICES

9. Appendices

Appendix A: SDG&E Information on WMP Initiative Activity Attainment

Below, Table 5 summarizes each of SDG&E's 48 initiative with targets from its 2023 WMP, SDG&E's self-reporting on compliance contained in its submission in response to Energy Safety DR-280, SDG&E's EC ARC, the IE ARC, the SVM Audit and Report, and SDG&E's comments on the IE ARC.[65]

Table 5. SDG&E WMP Initiative Activity Attainment Information[66]

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Covered Conductor Installation 8.1.2.1 WMP.455	60 miles	Met Target: 60 miles Actual: 78.8 miles	Met Target: 60 miles Actual: 60 miles	Met Target: 60 inspections Actual: 2,448 inspections[68]	Met	$79,026	$84,872

[65] 2023 WMP; DR-280 Response, Tables 1 and 11; EC ARC, Appendix A; IE ARC; SVM Audit and Report, IE ARC Comments.
[66] This table includes all initiative activities that had targets for the 2023 compliance year but does not include initiative activities for which SDG&E had planned or actual expenditures and no targets for the 2023 compliance year.
[67] DR-280 Response was used as the source of QDR information.
[68] IE ARC, page 42. It is unclear why the IE ARC referred to inspections as the targeted activity for this initiative.

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Undergrounding of Electric Lines and/or Equipment 8.1.2.2 WMP.473	84 miles	Not met Target: 84.4 miles Actual: 70.3 miles	Not met Target: 84 miles Actual: 72 miles	Not met Target: 84.4 miles Actual: 70.3 miles	Not met	$196,636	$175,207
Traditional Overhead Hardening 8.1.2.5.1 WMP.475	1.9 miles	Met Target: 1.9 miles Actual: 2.3 miles	Met Target: 1.9 miles Actual: 2.3 miles	Met Target: 1.9 miles Actual: 2.3 miles	Met	$3,785	$7,237

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Transmission System Hardening Program 8.1.2.5.2 WMP.543	14.1 miles	Met Target: 14.1 miles Actual: 15.8 miles	Met Target: 14 miles Actual: 16 miles	Met Target: 14 miles Actual: 188 installations[69]	Met	$ –	$ –
Transmission System Hardening Program 8.1.2.5.2 WMP.545	7.1 miles	Met Target: 7.1 miles Actual: 17.3 miles	Met Target: Seven miles Actual: 17 miles	Met Target: 7.1 miles Actual: 17.9 miles	Met	$11,397	$14,326.56

[69] The IE ARC, at page 44, referred to the total number of individual entries provided by SDG&E in a spreadsheet related to this initiative, rather than the number of miles completed. Nevertheless, the IE ARC determined that this initiative's target was met.

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Advanced Protection 8.1.2.8.1 WMP.463	5 circuits	Not met Target: five circuits Actual: four circuits	Not met Target: five circuits Actual: four circuits	Not met Target: five circuits Actual: four circuits	Not met	$10,006	$16,492
Early Fault Detection 8.1.2.8.2 WMP.1195	60 nodes	Not met Target: 60 nodes Actual: 32 nodes	Not met Target: 60 nodes Actual: 32 nodes	Not met Target: 60 nodes Actual: 32 nodes	Not met	$5,621	$6,065
Distribution Communications Reliability Improvements 8.1.2.8.3 WMP.549	35 stations	Not met Target: 35 base stations Actual: 11 base stations	Not met Target: 35 base stations Actual: 11 base stations	Not met Target: 35 base stations Actual: 11 base stations	Not met	$82,396	$76,625

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Avian Protection Program 8.1.2.10.1 WMP.972	200 poles	Met Target: 200 poles Actual: 657 poles	Met Target: 200 poles Actual: 657 poles	Met Target: 200 poles Actual: 657 poles	Met	$2,526	$1,444
Strategic Pole Replacement Program 8.1.2.10.2 WMP.1189	60 poles	Not met Target: 60 poles Actual: one pole	Not met Target: 60 poles Actual: one pole	Not met Target: 60 poles Actual: one pole	Not met	$1,840	$67
PSPS Sectionalizing Enhancement Program 8.1.2.11.1 WMP.461	10 switches	Met Target: 10 switches Actual: 10 switches	Met Target: 10 switches Actual: 10 switches	Met Target: 10 switches Actual: 10 installations	Met	$1,837	$2,035

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Standby Power Program (Fixed Backup Power for Residential and Commercial) 8.1.2.11.2 WMP.468	300 generators	Met Target: 300 generators Actual: 362 generators	Met Target: 300 generators Actual: 362 generators	Met Target: 300 generators Actual: 362 generators	Met	$10,350	$12,680
Distribution Overhead Detailed Inspections 8.1.3.1 WMP.478	11,100 inspections	Met Target: 11,100 structures Actual: 11,755 structures	Met Target: 11,100 inspections Actual: 11,755 inspections	Met Target: 11,100 inspections Actual: 11,734 inspections	Met	$11,348	$9,460
Transmission Overhead Detailed Inspections 8.1.3.2 WMP.479	2,387 inspections	Not met Target: 2,387 structures Actual: 1,928 structures	Not met Target: 2,387 structures Actual: 1,928 structures	Not met Target: 2,387 inspections Actual: 1,928 inspections	Not met	$851	$1,572

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Distribution Infrared Inspections 8.1.3.3 WMP.481	9,578 inspections	Met Target: 9,578 structures Actual: 11,990 structures	Met Target: 9,578 inspections Actual: 11,900 inspections	Met Target: 9,578 inspections Actual: 11,987 inspections	Met	$175	$305
Transmission Infrared Inspections 8.1.3.4 WMP.482	6,179 inspections	Met Target: 6,179 structures Actual: 6,077 structures	Met Target: 6,179 structures Actual: 6,077 structures	Met Target: 6,179 inspections Actual: 6,077 inspections	Met	$ –	$ –
Distribution Wood Pole Intrusive Inspections 8.1.3.5 WMP.483	50 inspections	Met Target: 50 structures Actual: 1,038 structures	Met Target: 50 inspections Actual: 1,038 inspections	Met Target: 50 inspections Actual: 1,053 inspections	Met	$1,616	$1,426

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Transmission Wood Pole Intrusive Inspections 8.1.3.6 WMP.1190	73 inspections	Met Target: 73 structures Actual: 90 structures	Met Target: 73 structures Actual: 90 structures	Met Target: 73 inspections Actual: 81 inspections	Met	$ –	$ –
Drone Assessments 8.1.3.7 WMP.552	13,692 inspections	Met Target: 13,692 structures Actual: 15,311 structures	Met Target: 13,692 poles Actual: 15,311 poles	Met Target: 13,692 assessments Actual: 15,313 assessments	Met	$133,911	$128,046
Distribution Overhead Patrol Inspections 8.1.3.8 WMP.488	86,880 inspections	Met Target: 86,880 structures Actual: 85,857 structures	Met Target: 86,880 inspections Actual: 85,857 inspections	Met Target: 86,880 inspections Actual: 85,847 inspections	Met	$1,237	$1,092

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Transmission Overhead Patrol Inspections 8.1.3.9 WMP.489	6,337 inspections	Met Target: 6,337 structures Actual: 6,200 structures	Met Target: 6,337 structures Actual: 6,200 structures	Met Target: 6,337 inspections Actual: 6,200 inspections	Met	$ –	$ –
Transmission 69kV Tier 3 Visual Inspections 8.1.3.10 WMP.555	1,632 inspections	Met Target: 1,632 structures Actual: 1,602 structures	Met Target: 1,632 structures Actual: 1,602 structures	Met Target: 1,632 inspections Actual: 1,648 inspections	Met	$ –	$ –
Substation Patrol Inspections 8.1.3.11 WMP.492	384 inspections	Met Target: 384 substations Actual: 396 substations	Met Target: 384 inspections Actual: 396 inspections	Met Target: 384 inspections Actual: 396 inspections	Met	$ –	$ –

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
SCADA Capacitors Maintenance and Replacement Program 8.1.4.3 WMP.453	15 capacitors	Met Target: 15 capacitors Actual: 20 capacitors	Met Target: 15 capacitors Actual: 20 capacitors	Met Target: 15 capacitors Actual: 20 capacitors	Met	$1,885	$1,557
Expulsion Fuse Replacement Program 8.1.4.4 WMP.459	40 fuses	Not met Target: 40 fuses Actual: 36 fuses	Met Target: 40 fuses Actual: 36 fuses	Not met Target: 40 fuses Actual: 36 fuses	Not met	$93	$50
Hotline Clamp Replacement Program 8.1.4.5 WMP.464	250 hotline clamps	Met Target: 250 hotline clamps Actual: 962 hotline clamps	Met Target: 250 hotline clamps Actual: 962 hotline clamps	Met Target: 250 hotline clamps Actual: 962 hotline clamps	Met	$486	$1,642

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Lightning Arrester Removal and Replacement 8.1.4.6 WMP.550	1,848 lightning arresters	Met Target: 1,848 lightning arresters Actual: 2,216 lightning arresters	Met Target: 1,848 lightning arresters Actual: 2,216 lightning arresters	Met Target: 1,848 lightning arresters Actual: 2,216 lightning arresters	Met	$3,407	$3,432
QA/QC of Transmission Inspections 8.1.6.1 WMP.1191	100% of conditions identified during inspection	Met Target: 100% findings Actual: 97% findings	Met Target: 100 structures Actual: 100 structures	Met Target: 100% of findings Actual: 182 locations	Met	$ –	$ –
QA/QC of Distribution Detailed Inspections 8.1.6.2 WMP.491	0.5%-1.5% per inspector	Not met Target: 160 structures Actual: 150 structures	Met Target: 160 inspections Actual: 150 inspections	Met Target: 160 inspections Actual: 150 inspections	Not met	$ –	$ –

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
QA/QC of Distribution Drone Assessments 8.1.6.3 WMP.1192	100%	Met Target: 13,692 structures Actual: 15,311 structures	Met Target: 13,692 inspections Actual: 15,311 inspections	Met Target: 13,692 inspections Actual: 15,134 inspections	Met	$ –	$ –
QA/QC of Transmission and Distribution Wood Pole Intrusive Inspections 8.1.6.4 WMP.1193	10%	Met Target: 12 structures Actual: 111 structures	Met Target: 12 inspections Actual: 111 inspections	Met Target: 12 inspections Actual: 122 inspections	Met	$ –	$ –

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
QA/QC of Substation Inspections 8.1.6.5 WMP.1194	18 inspections	Met Target: 18 structures Actual: 23 structures	Met Target: 18 inspections Actual: 23 inspections	Met Target: 18 inspections Actual: 23 inspections	Met	$ –	$ –
Detailed Vegetation Inspections 8.2.2.1 WMP.494	485,400 inspections	Met Target: 485,400 inspections Actual: 514,626 inspections	Met Target: 485,400 trees Actual: 514,626 trees	Met Target: 485,400 inspections Actual: 512,186 inspections	Met	$44,559	$67,765

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Off-Cycle Patrol Inspections 8.2.2.2 and 8.2.2.1.1[70] WMP.508	106 vegetation management areas	Met Target: 106 vegetation management areas Actual: 106 vegetation management areas	Met Target: 106 vegetation management areas	Met Target: 106 vegetation management areas Actual: 106 vegetation management areas	Met	$ –	$ –
Fuels Management 8.2.3 WMP.497	500 poles cleared	Met Target: 500 poles cleared Actual: 514 poles cleared	Met Target: 500 poles cleared Actual: 514 poles cleared	Met Target: 500 poles cleared Actual: 514 poles cleared	Met	$7,011	$5,255

[70] WMP, pages 266 and 258, respectively.

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Pole Clearing 8.2.3.1 WMP.512	33,010 poles	Met Target: 33,010 poles brushed Actual: 35,258 poles brushed	Met Target: 33,010 poles brushed Actual: 35,258 poles brushed	Met Target: 33,010 poles brushed Actual: 35,258 poles brushed	Met	$6,411	$8,004
Wood and Slash Management 8.2.3.2 WMP.497	Tree trimming and removal	Missing	Missing	Missing	Not met[71]	$ –	$ –

[71] SVM Audit Report, pages 10-12.

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Clearance, "Enhanced" 8.2.3.3 WMP.501	11,200 trees trimmed or removed	Met Target: 11,200 trees trimmed or removed Actual: 13,419 trees trimmed or removed	Met Target: 11,200 trees trimmed or removed Actual: 13,419 trees trimmed or removed	Met Target: 11,200 trees trimmed or removed Actual: 13,419 trees trimmed or removed	Met	$10,235	$ –
Fall-in Mitigation 8.2.3.4 WMP.494	Integrated within Off-Cycle Patrol Inspections - 8.2.2.1.1 (WMP.508)	Missing	Missing	Missing	Met[72]	$ –	$ –

[72] SVM Audit, pages 15-16; and SVM Audit Report, page 3.

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Substation Defensible Space 8.2.3.5	Integrated within Substation Patrol Inspections - 8.1.3.11 (WMP.492)	Missing	Missing	Missing	Met[73]	$ –	$ –
High-Risk Species 8.2.3.6 WMP.1325 and WMP.1326	Integrated within Clearance, “Enhanced” - 8.2.3.3 (WMP.501)	Missing	Missing	Missing	Met[74]	$1,000	$1,208

[73] SVM Audit, pages 16-17; and SVM Audit Report, page 3.
[74] SVM Audit, pages 17-18; and SVM Audit Report, page 3.

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Fire Resilient Right-of-Ways 8.2.3.7 WMP.1327 and WMP.1328	Promote vegetation communities that are sustainable, fire-resilient, and compatible with the use of the land as an electrical corporation right-of-way	Missing	Missing	Missing	Met[75]	$ –	$ –

[75] SVM Audit, pages 19-20, and SVM Audit Report, page 3.

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Emergency Response Vegetation Management 8.2.3.8 WMP.496	Continue planning and execution of vegetation activities in response to emergency situations including weather conditions.[76]	Missing	Missing	Missing	Met[77]	$ –	$ –
Vegetation Management Enterprise System 8.2.4.1 WMP.511	Inventory vegetation and manage inspections	Missing	Missing	Missing	Met[78]	$2,096	$880

[76] SVM Audit, page A-20, and SVM Audit Report, page 3.
[77] SVM Audit, pages A-20-A-21, and SVM Audit Report, page 3.
[78] SVM Audit, pages A-21-A-22, and SVM Audit Report, page3.

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
QA/QC Vegetation Management 8.2.5.1 WMP.505	Perform audits of all Vegetation Management-related activities including pre-inspection, clearance (tree trimming), and pole clearing.	Met Target: 15% inspections Actual: 18% inspections	Met Target: 15% inspections Actual: 17.5% inspections	Met Target: 15% inspections Actual: 17.1% inspections	Met	$ –	$ –

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Open Work Orders 8.2.6.1 WMP.1329	Actions taken to manage the electrical corporation's open work orders resulting from inspections that prescribe vegetation management activities.[79]	Missing	Missing	Missing	Met[80]	$ –	$ –

[79] SVM Audit, page A-22.
[80] SVM Audit, pages A-25-A-26; and SVM Audit Report, page 3.

2023 WMP Initiative	2023 WMP Activity Target	QDR[67]	EC ARC	IE ARC	Attainment Status	Planned Expenditure ($ thousand)	Actual Expenditure ($ thousand)
Workforce Planning 8.2.7 WMP.506	Ensure electrical corporation has qualified vegetation management personnel.[81]	Missing	Missing	Missing	Met[82]	$ –	$ –
Air Quality Index Sensor – Installation 8.3.2.1.3 WMP.970	Six sensors	Not met Target: six sensors Actual: five sensors	Met Target: six sensors Actual: six sensors	Not met Target: six sensors Actual: five sensors	Not met	$86	$148

[81] SVM Audit, page A-26; and SVM Audit Report, page 3.
[82] SVM Audit, pages A-26-A-27; and SVM Audit Report, page 3.

Appendix B: Substantial Vegetation Management Audit of SDG&E

On December 31, 2024, Energy Safety issued its Substantial Vegetation Management (SVM) Audit for SDG&E.

In the SVM Audit, Energy Safety considered 13 initiatives and found five initiatives where SDG&E did not perform all the work and required SDG&E to provide a response to these findings in its Corrective Action Plan.

After reviewing SDG&E's subsequent Corrective Action Plan, filed on January 31, 2025, Energy Safety issued its SVM Audit Report on April 21, 2025. The SVM Audit Report concluded that, of the 13 SVM initiatives considered, SDG&E did not substantially complete all work for one vegetation management initiative – Wood and Slash Management – 8.2.3.2.

The findings from Energy Safety's SVM Audit and SVM Audit Report are summarized in Table 6.

Table 6. Energy Safety Findings from SDG&E 2023 SVM Audit and SVM Audit Report of WMP Vegetation Management Initiatives

2023 WMP Initiative Tracking ID	2023 WMP Initiative Name	SVM Audit Determination	SVM Audit Report Determination
8.2.2.1 Vegetation Management Inspections	Vegetation Management Inspections	Did not complete all work	Substantially complied
8.2.3.1 Vegetation and Fuels Management	Pole Clearing	Completed all work	Not addressed in SVM Audit Report
8.2.3.2 Vegetation and Fuels Management	Wood and Slash Management	Did not complete all work	Did not substantially comply
8.2.3.3 Vegetation and Fuels Management	Clearance	Did not complete all work	Completed all work

2023 WMP Initiative Tracking ID	2023 WMP Initiative Name	SVM Audit Determination	SVM Audit Report Determination
8.2.3.4 Vegetation and Fuels Management	Fall-In Mitigation	Completed all work	Not addressed in SVM Audit Report
8.2.3.5 Vegetation and Fuels Management	Substation Defensible Space	Completed all work	Not addressed in SVM Audit Report
8.2.3.6 Vegetation and Fuels Management	High-Risk Species	Completed all work	Not addressed in SVM Audit Report
8.2.3.7 Vegetation and Fuels Management	Fire Resilient Right-of-Ways	Completed all work	Not addressed in SVM Audit Report
8.2.3.8 Vegetation and Fuels Management	Emergency Response Vegetation Management	Completed all work	Not addressed in SVM Audit Report
8.2.4.1 Vegetation Management Enterprise System	Vegetation Management Enterprise System	Completed all work	Not addressed in SVM Audit Report
8.2.5.1 Quality Assurance and Quality Control	Quality Assurance and Quality Control	Did not complete all work	Substantially complied
8.2.6.1 Open Work Orders	Open Work Orders	Did not complete all work	Substantially complied
8.2.7 Workforce Planning	Workforce Planning	Completed all work	Not addressed in SVM Audit Report

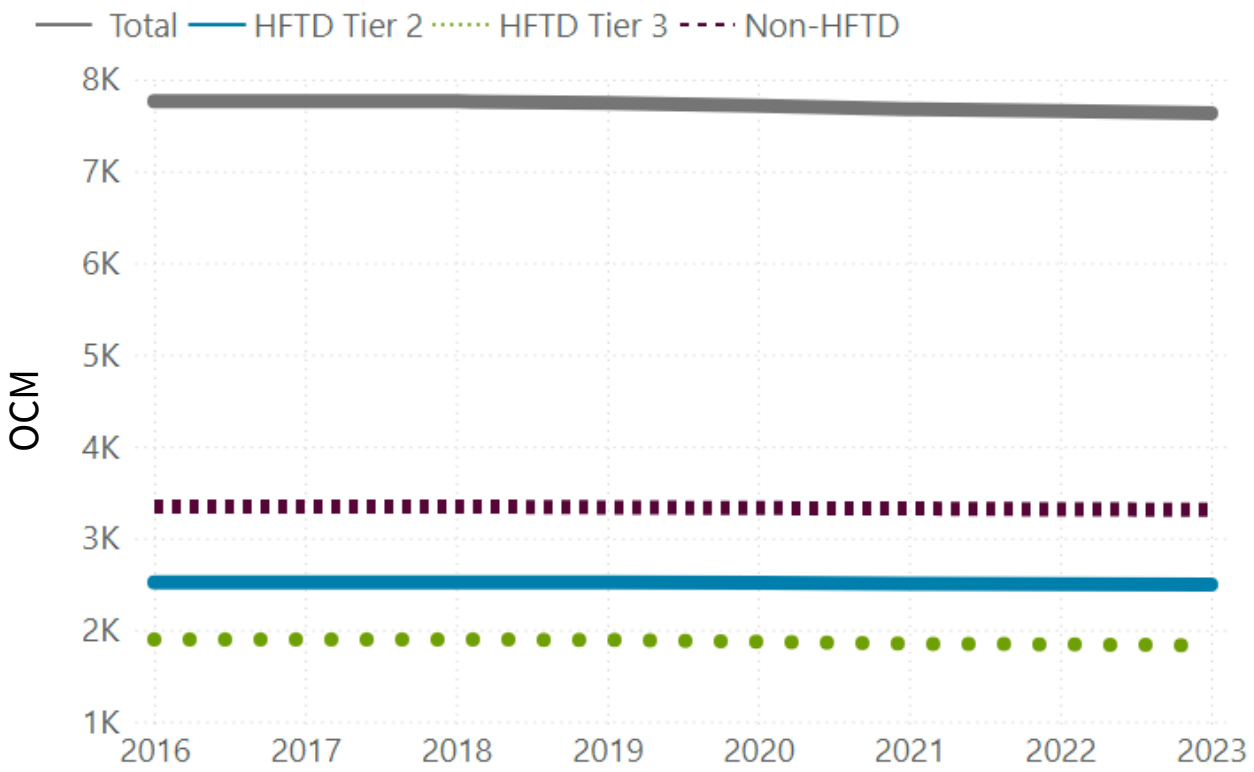
Appendix C: Additional Ignition Risk Analyses

Data for this appendix comes from the QDRs and a data request as reported by SDG&E.[83]

Overhead Circuit Miles

The number of overhead circuit miles (OCM) has remained almost constant between 2016 and 2023 (Figure 15).

Figure 15. SDG&E Overhead Circuit Miles (2016-2023) by HFTD Tier

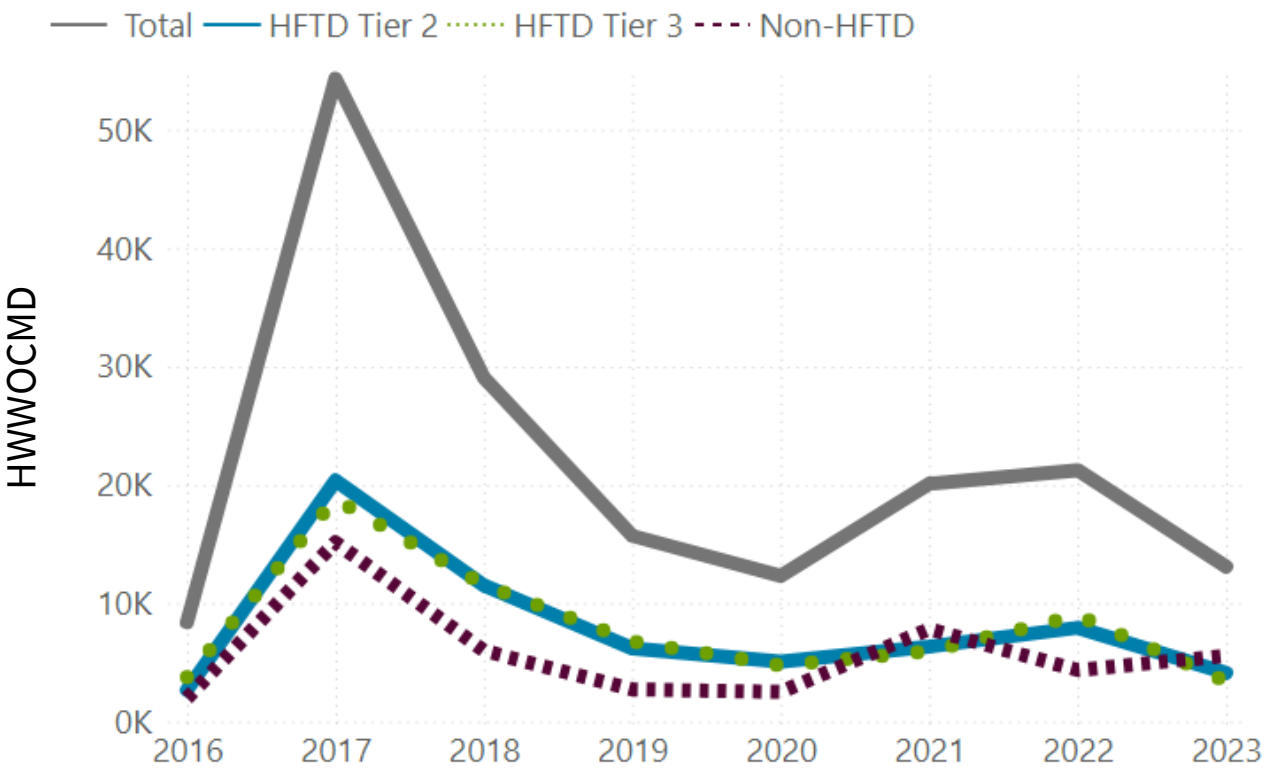


High Wind Warning Overhead Circuit Mile Days

The number of high wind warning overhead circuit mile days (HWWOCMD) decreased from the high in 2017 and has remained relatively low through 2023 (Figure 16).

[83] Energy Safety relied on data reported in the third quarter 2022 QDR for the 2016 through 2021 values, the fourth quarter 2023 QDR for the 2022, DR-280 Response for the 2023 values, and DR-OEIS-C-ARC-2023-SDGE-016 Response for updated HWWOCMD and RFWOCMD.

Figure 16. SDG&E High Wind Warning Overhead Circuit Mile Days (2016-2023) by HFTD Tier



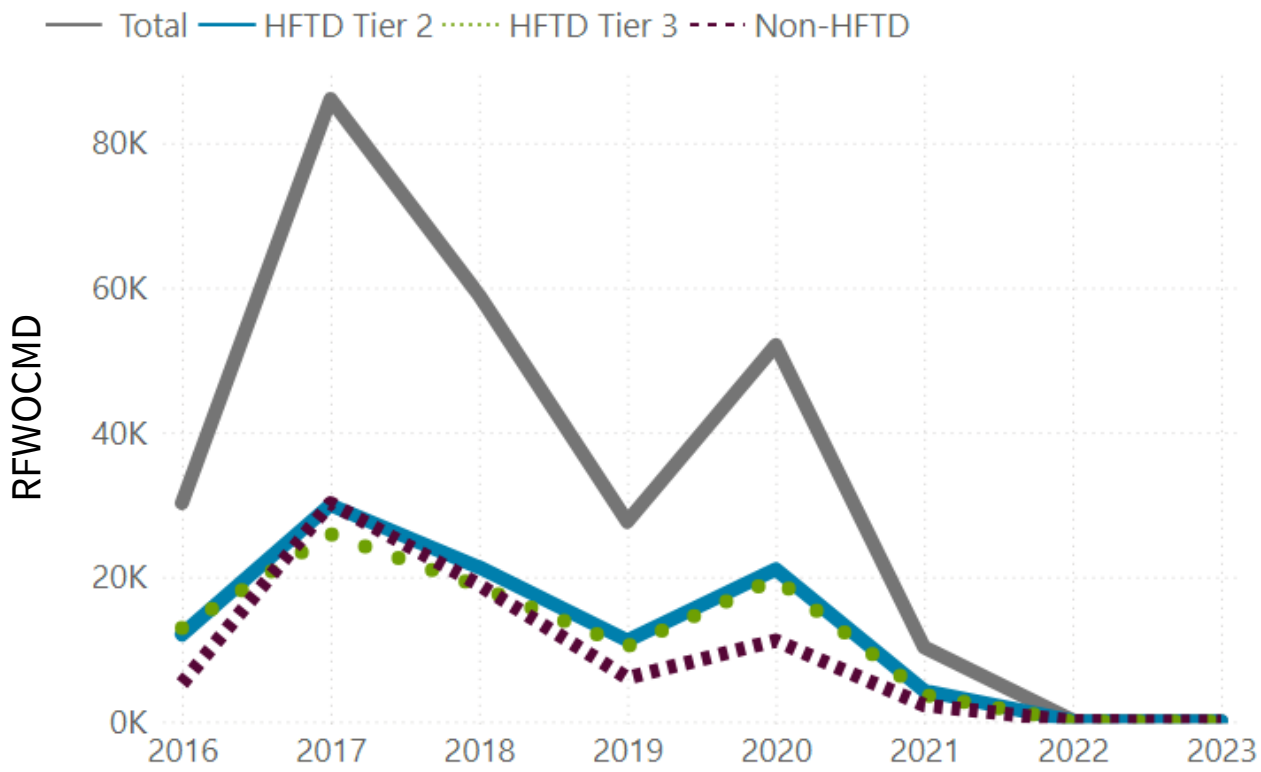
*The values in prior years do not match those reported in the 2022 ARC as prior reporting included undergrounded circuit miles but more recent reporting included only overhead circuit miles.[84]

Red Flag Warning Overhead Circuit Mile Days

The number of red flag warning overhead circuit mile days (RFWOCMD) has fluctuated between 2016 and 2023, with a peak in 2017 and a general decrease since then (Figure 17). The total number of RFWOCMDs in all areas decreased to nearly zero for 2022 and 2023, which results in large fluctuations of the normalized data presented in subsequent figures.

[84] DR-OEIS-C-ARC-2023-SDGE-016 Response.

Figure 17. SDG&E Red Flag Warning Overhead Circuit Mile Days (2016-2023) by HFTD Tier



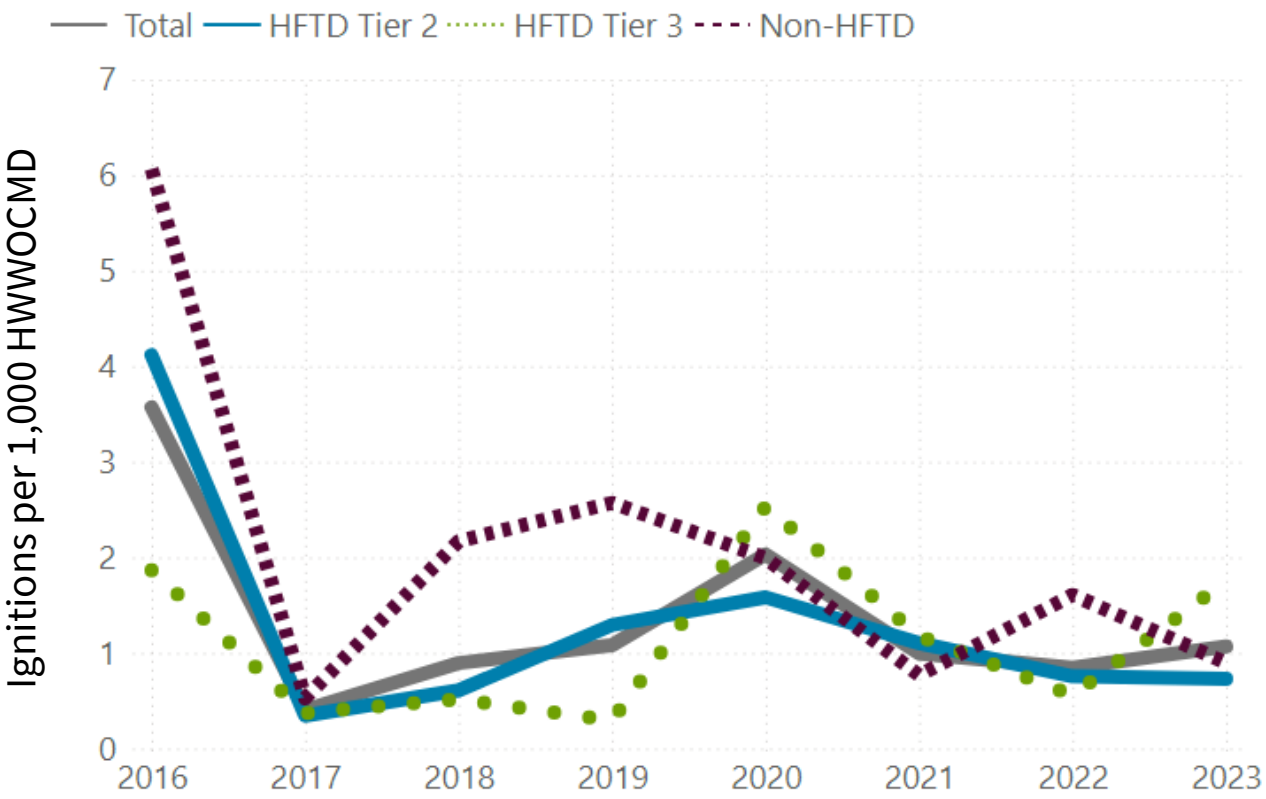
* The values in prior years do not match those reported in the 2022 ARC as prior reporting included undergrounded circuit miles but more recent reporting included only overhead circuit miles.[85]

Ignitions Normalized by High Wind Warning Overhead Circuit Mile Days by HFTD Tiers

To account for year-by-year variations in weather, ignitions were normalized by HWWOCMD. The normalized ignition totals exhibited a decrease in 2016, followed by a slight increase through 2020, and have remained low through 2023 (Figure 18). No single HFTD tier appears to be the main driver of the normalized ignition totals.

[85] DR-OEIS-C-ARC-2023-SDGE-016 Response.

Figure 18. SDG&E Ignitions Normalized by HWWOCMD (2016-2023) by HFTD Tier



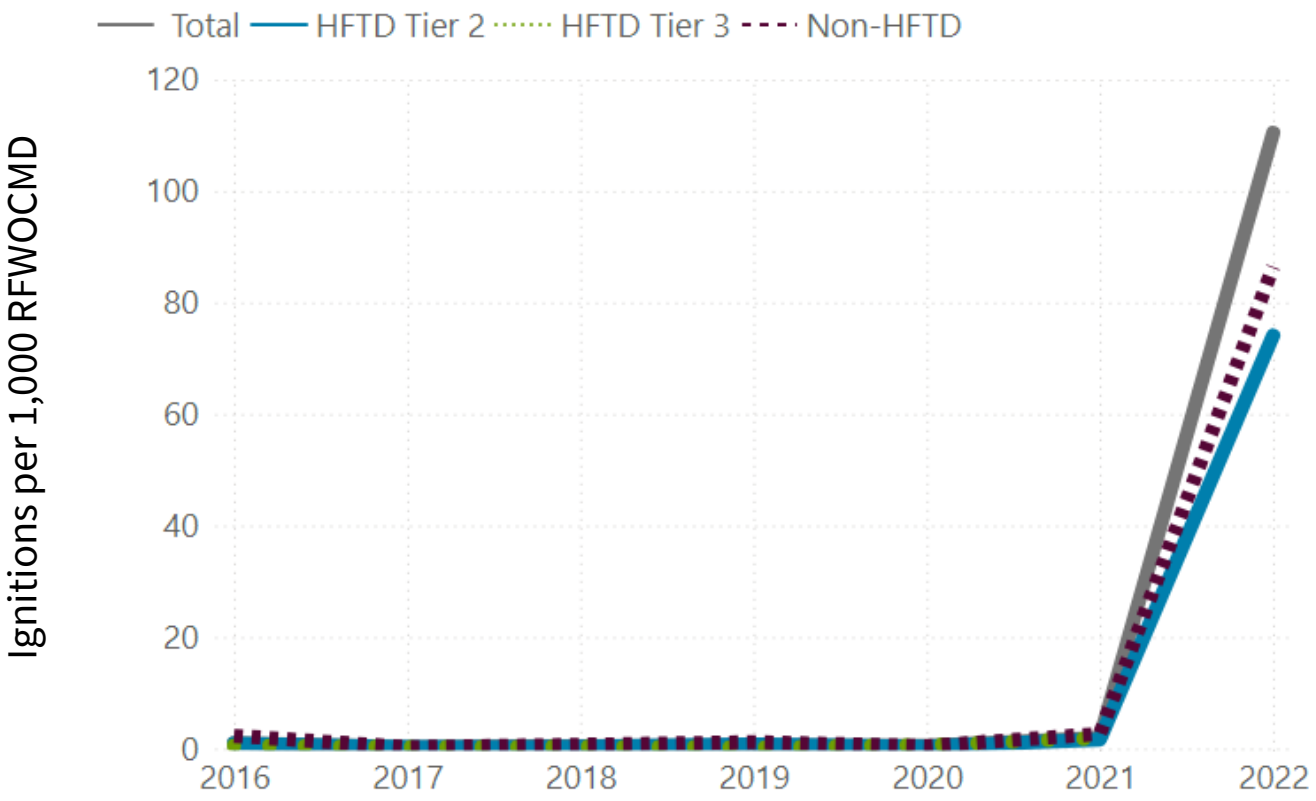
* The values in prior years do not match those reported in the 2022 ARC as prior reporting included undergrounded circuit miles but more recent reporting included only overhead circuit miles.[86]

Ignitions Normalized by Red Flag Warning Overhead Circuit Mile Days by HFTD Tiers

The total number of ignitions normalized by RFWOCMD exhibited a general increase from 2021 to 2022. Dividing by almost zero RFWOCMDs for 2022 makes the normalized value large for the year (Figure 19). There were zero RFWOCMDs in 2023, resulting in a null value for the normalized count. As a result, the figure does not include the normalized ignitions data for 2023.

[86] DR-OEIS-C-ARC-2023-SDGE-016 Response.

Figure 19. SDG&E Ignitions Normalized by RFWOCMD (2016-2023) by HFTD Tier



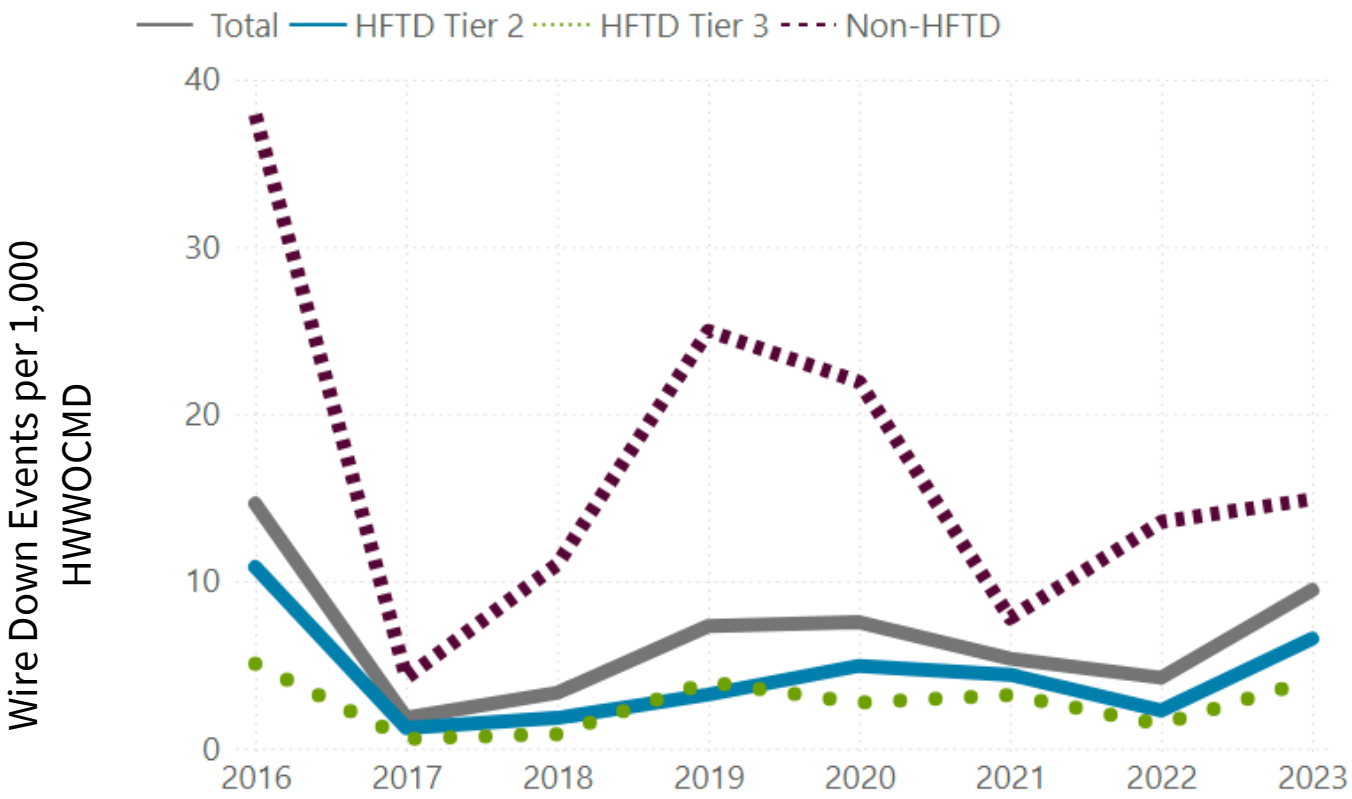
* The values in prior years do not match those reported in the 2022 ARC as prior reporting included undergrounded circuit miles but more recent reporting included only overhead circuit miles.[87]

Wire Down Events Normalized by High Wind Warning Overhead Circuit Mile Days

When accounting for high wind conditions that may cause downed wires, the number of wire down events normalized by HWWOCMD shows a decrease from 2016 to 2017 (Figure 20). The non-HFTD tier appears to be the main driver of the normalized wire down events total.

[87] DR-OEIS-C-ARC-2023-SDGE-016 Response.

Figure 20. SDG&E Wire Down Events Normalized by HWWOCMD (2016-2023) by HFTD Tier



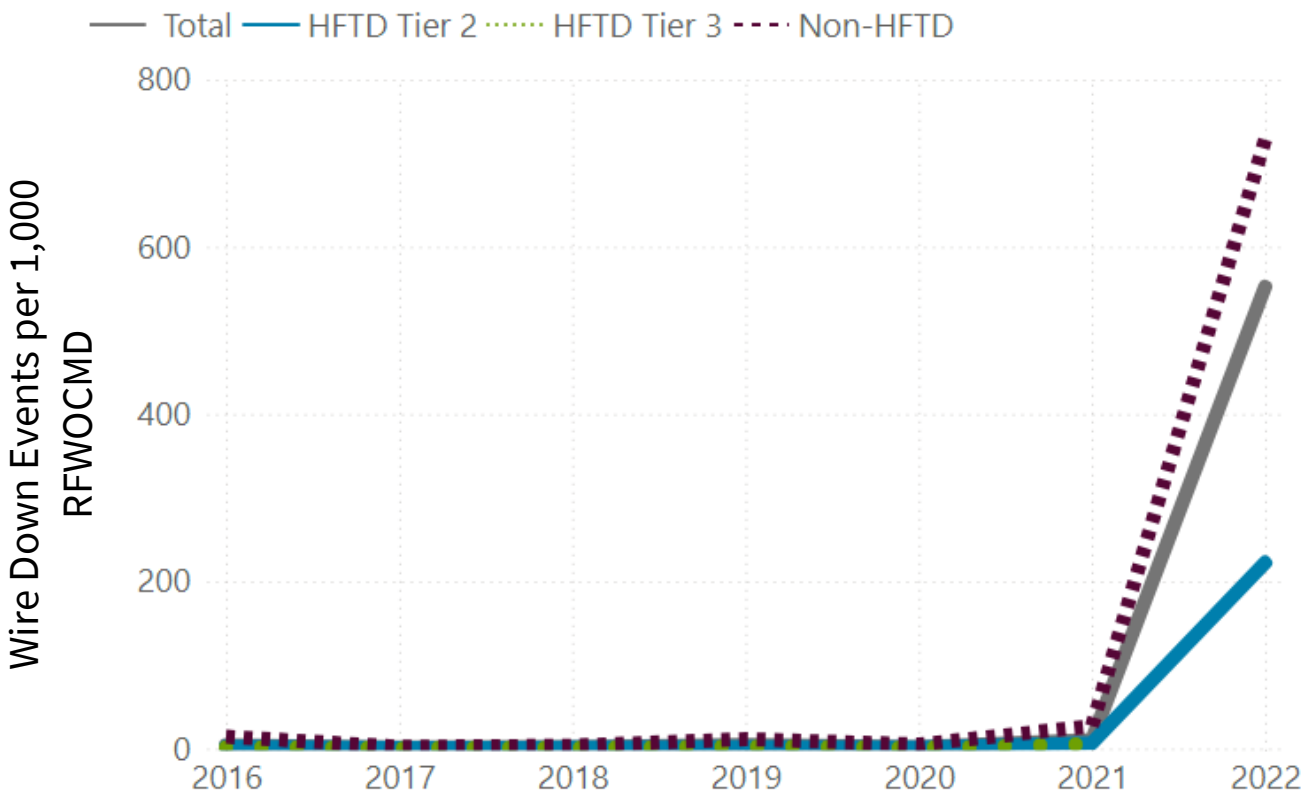
* The values in prior years do not match those reported in the 2022 ARC as prior reporting included undergrounded circuit miles but more recent reporting included only overhead circuit miles.[88]

Wire Down Events Normalized by Red Flag Warning Overhead Circuit Mile Days

Wire down events normalized by RFWOCMD exhibited a general increase from 2021 to 2022. Dividing by almost zero RFWOCMDs for 2022 makes the normalized value large for the year. There were zero RFWOCMDs in 2023, resulting in a null value for the normalized count. As a result, the figure below does not include the normalized wire down events for 2023 (Figure 21).

[88] DR-OEIS-C-ARC-2023-SDGE-016 Response.

Figure 21. SDG&E Wire Down Events Normalized by RFWOCMD (2016-2023) by HFTD Tier



* The values in prior years do not match those reported in the 2022 ARC as prior reporting included undergrounded circuit miles but more recent reporting included only overhead circuit miles.[89]

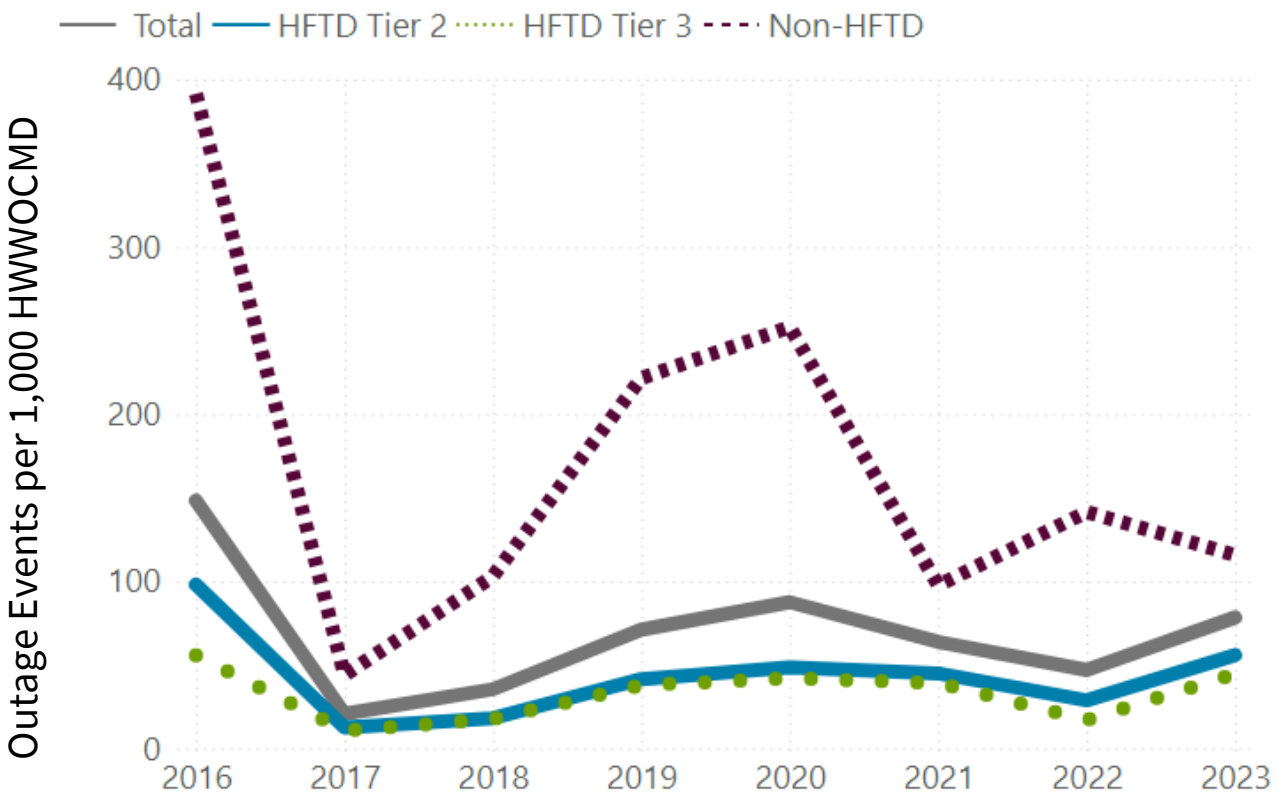
Outage Events Normalized by High Wind Warning Overhead Circuit Mile Days

To view the outage events with respect to year-to-year weather variations, outage event counts have been normalized by HWWOCMD.

Outage events normalized by HWWOCMD show a general decrease since 2016 and remain low through 2023 (Figure 22). The non-HFTD tier appears to be the main driver of the normalized wire down events total.

[89] DR-OEIS-C-ARC-2023-SDGE-016 Response.

Figure 22. SDG&E Outage Events Normalized by HWWOCMD (2016-2023) by HFTD Tier



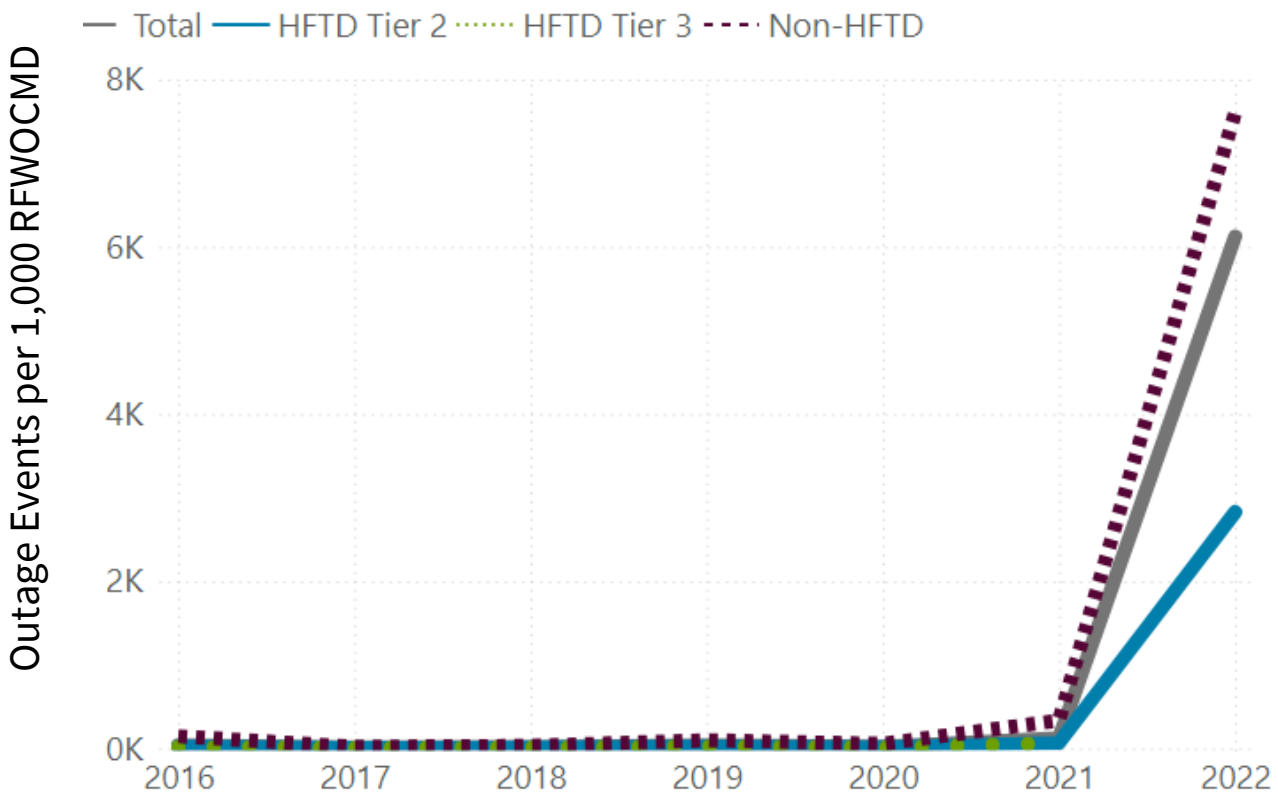
* The values in prior years do not match those reported in the 2022 ARC as prior reporting included undergrounded circuit miles but more recent reporting included only overhead circuit miles.[90]

Outage Events Normalized by Red Flag Warning Overhead Circuit Mile Days

Unplanned outage events normalized by RFWOCMDs show a general increase from 2021 to 2022 due to dividing by a low value of RFWOCMD for 2022 (Figure 23). In 2023, there were zero RFWOCMDs, resulting in a null value for the normalized count. As a result, the figure below does not include the normalized outage event data for 2023.

[90] DR-OEIS-C-ARC-2023-SDGE-016 Response.

Figure 23. SDG&E Outage Events Normalized by RFWOCMD (2016-2023) by HFTD Tier



* The values in prior years do not match those reported in the 2022 ARC as prior reporting included undergrounded circuit miles but more recent reporting included only overhead circuit miles.[91]

[91] DR-OEIS-C-ARC-2023-SDGE-016 Response.