May 7, 2024 **Via Electronic Filing**

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Subject: **Comments of the Public Advocates Office on SCE's 2025 Wildfire Mitigation Plan Update**

Docket: **2023-2025-WMPs**

Dear Director Thomas Jacobs,

The Public Advocates Office at the California Public Utilities Commission (Cal Advocates) respectfully submits the following comments on the 2025 Wildfire Mitigation Plan Update of Southern California Edison Company (SCE). Please contact Nathaniel Skinner (Nathaniel.Skinner@cpuc.ca.gov) or Henry Burton (Henry.Burton@cpuc.ca.gov) with any questions relating to these comments.

We respectfully urge the Office of Energy Infrastructure Safety to adopt the recommendations discussed herein.

Respectfully submitted,

/s/ ***Marybelle C. Ang***

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I. INTRODUCTION

The Public Advocates Office at the California Public Utilities Commission (Cal Advocates) submits these comments on the 2025 Wildfire Mitigation Plan (WMP) Updates submitted by investor-owned electric utilities (IOUs or utilities).[1] These comments are submitted pursuant to the Office of Energy Infrastructure Safety's (Energy Safety) *Revised 2023-2025 Wildfire Mitigation Plan Process and Evaluation Guidelines* (WMP Process Guidelines)[2] and the *Revised 2025 Wildfire Mitigation Plan Update Schedule*.[3]

The 2025 Wildfire Mitigation Plan Update Guidelines (2025 WMP Update Guidelines)[4] establish substantive requirements for these WMP Update submissions, while the WMP Process Guidelines establish a schedule and review process for WMP submissions. Bear Valley Electric Service (BVES), Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), and Southern California Edison Company (SCE), submitted 2025 WMP Updates on April 2, 2024.

The WMP Process Guidelines and the 2025 WMP Update schedule permit interested persons to file opening comments on the WMP Updates of BVES, PG&E, SDG&E, and SCE by May 7, 2024 and reply comments by May 17, 2024. In these comments, Cal Advocates addresses SCE's 2025 WMP Update.

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[1] Many of the Public Utilities Code requirements relating to wildfires apply to "electrical corporations." *See e.g.,* Public Utilities Code Section 8386. These comments use the more common term "utilities" and the phrase "electrical corporations" interchangeably to refer to the entities that must comply with the wildfire safety provisions of the Public Utilities Code.

[2] Office of Energy Infrastructure Safety's (Energy Safety), *Revised 2023-2025 Wildfire Mitigation Plan Process and Evaluation Guidelines*, January 31, 2024, in docket 2023-2025-WMPs.

See also: Energy Safety, *Final 2023-2025 Wildfire Mitigation Plan Process and Evaluation Guidelines*, December 6, 2022.

[3] Energy Safety, *Revised 2025 Wildfire Mitigation Plan Update Schedule*, February 22, 2024, in docket 2023-2025-WMPs.

[4] Energy Safety, *2025 Wildfire Mitigation Plan Update Guidelines*, January 31, 2024, in docket 2023-2025-WMPs

II. TABLE OF RECOMMENDATIONS

Item	Recommendation	Timeframe	Section of these Comments
1	Energy Safety should direct SCE to enhance overhead inspection protocols and training to address QA/QC audit failures.	Revised 2025 WMP Update	III.A
2	SCE should develop a comprehensive strategy that includes a thorough root cause analysis to understand why inspections are missing critical safety issues.	Revised 2025 WMP Update	III.A
3	SCE should update its training programs to ensure that inspectors are well-equipped to identify and report issues accurately.	Revised 2025 WMP Update	III.A
4	SCE should implement stricter audit procedures, possibly with third-party oversight, for inspections.	Revised 2025 WMP Update	III.A
5	Energy Safety should direct SCE to improve its management of asset work orders, especially those that pose an ignition risk.	Revised 2025 WMP Update	III.B
6	SCE should propose an operational overhaul to enable the timely resolution of asset maintenance needs, especially the riskiest work orders.	Revised 2025 WMP Update	III.B.4
7	SCE should consider bolstering its workforce to deal with the growing backlog.	Revised 2025 WMP Update	III.B.4
8	SCE should increase the number of specialized inspection and repair crews dedicated to HFTD Tier 3 areas.	Revised 2025 WMP Update	III.B.4
9	SCE should collaborate with local governments, agencies, and property owners to create fast-track permitting processes for high-risk areas.	Revised 2025 WMP Update	III.B.4
10	SCE's work order prioritization should target the most critical issues first. SCE should prioritize work orders by their potential to cause fires or other public safety hazards, not just by how long they have been overdue.	Revised 2025 WMP Update	III.B.4
11	SCE should set specific quarterly targets to decrease the numbers of total open asset work orders, ignition-risk work orders, and ignition-risk work orders that are severely overdue.	Revised 2025 WMP Update	III.B.4

12	Energy Safety should require SCE to examine the use of probabilistic models for its risk assessment strategy.	Revised 2025 WMP Update	IV.A
13	Energy Safety should require SCE resubmit its 2025 WMP due to its inadequacy in addressing ACI SCE 23-02.	Revised 2025 WMP Update	IV.A.2
14	Energy Safety should require SCE to justify its proposed deferral of system hardening targets and its ambitious REFCL targets	Revised 2025 WMP Update	V.A
15	Energy Safety should require SCE to revise its 2025 WMP update with sufficient detail on deferring system hardening miles into future years and more detail on its REFCL targets	Revised 2025 WMP Update	V.A.4
16	SCE should address shortcomings in its system hardening plans. Specifically, SCE should provide sufficient detail on its plans to defer 2025 covered conductor and targeted undergrounding miles into future years.	Revised 2025 WMP Update	V.A.4
17	SCE's revised 2025 WMP Update should include an interim risk management strategy for the deferred 2025 covered conductor and targeted underground locations.	Revised 2025 WMP Update	V.A.4
18	SCE should revise its 2025 WMP Update with more realistic REFCL targets. SCE should support its proposed targets with an analysis of the pace and scale of work that is feasible.	Revised 2025 WMP Update	V.A.4

III. ASSET MANAGEMENT

A. Energy Safety should direct SCE to enhance overhead inspection protocols and training to address QA/QC audit failures.

The quality assurance and quality control (QA/QC) audit results for SCE's 2023 overhead detailed inspections present significant failures of SCE's inspection program. Specifically, SCE reports 88 instances where the original inspection missed critical observations involving cotter pin issues and secondary conductor damage.[5] These failures have resulted in increased threats to the public. The QC audit results indicate that SCE should revisit its inspection processes and may need to implement corrective actions to improve the quality of its detailed inspections.[6]

The results of SCE's 2023 QA/QC audit findings on detailed inspections are troubling. In 2023, SCE conducted 3,357 QA/QC audits of structures that had been subject to a detailed inspection.[7] These audits found 194 structures that were graded as "high or moderate non-conforming."[8] Two categories of findings stand out as concerning because they account for 88 non conformances.[9] In other words, nearly *half* of the non-conformances highlight the inability

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[5] In response to data request CalAdvocates-SCE-2025WMP-03, question 1, April 12, 2024, SCE provided a screenshot of its end of year overhead detailed inspection results on a quality dashboard. The dashboard presents various metrics, including a count of quality control audits conducted, compliance rates of various programs, and the most common observations sorted into categories.

[6] In response to data request CalAdvocates-SCE-2025WMP-03, question 1, April 12, 2024, SCE states:

> Actionable findings identified during QC inspections are used for performance scoring to measure the ability of SCE inspectors to accurately identify and classify the potential safety and reliability risks of General Order 95 violations, potential ignition risks, and other safety hazards. All findings identified during the QC review are remediated, and in some instances, corrective actions are initiated.

[7] SCE response to data request CalAdvocates-SCE-2025WMP-03, question 1, April 12, 2024. The dashboard indicates that 3,357 structures were inspected.

[8] In response to data request CalAdvocates-SCE-2025WMP-09, question 2, April 26, 2024, SCE states that the term "high or moderate non-conforming" refers to "non-conforming structures that contain either a Level 1 (high) or Level 2 (moderate) condition as defined in General Order No. 95 Rule 18."

[9] In response to data request CalAdvocates-SCE-2025WMP-03, question 1, April 12, 2024, SCE provided a screenshot of its end of year overhead detailed inspection results on a quality dashboard.

The dashboard indicates that 16 ODI inspections failed to identify that there was "secondary conductor damage" and 72 ODI inspections failed to identify that a "cotter pin [or key] was not properly secured."

88 (16+72) out of 194 non conformances is 45 percent or about half of all non-conformances.

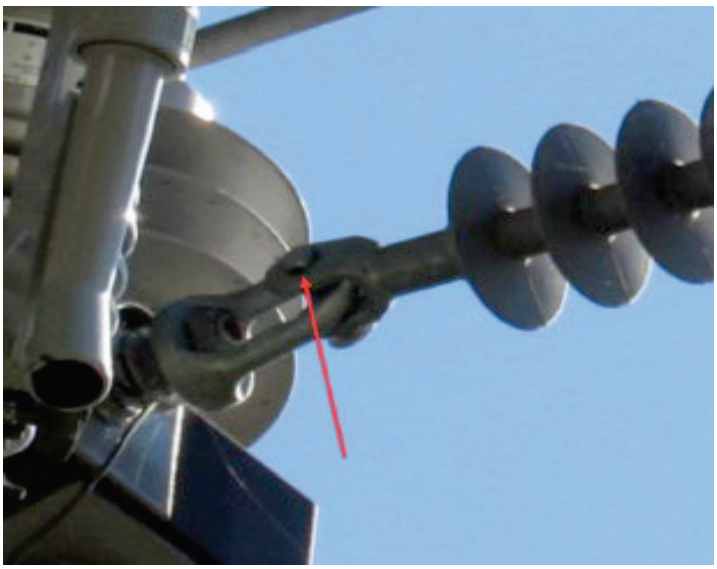
of SCE's inspectors to accurately identify serious potential safety and ignition risks during detailed inspections

Audit inspectors noted 72 instances where the inspector did not identify that a "cotter pin [or key] was not properly secured." Figure A shows a cotter pin (or key) that is preventing the clevis pin from falling out due to vibration or excessive force.[10] If the cotter pin is improperly secured or is missing (as in Figure B), the insulator anchored to the distribution pole might detach, contact another conductor, and create sparks. A single hardware failure can cause catastrophic results, as when a worn C-hook led to the Camp Fire.

Figure A: Cotter pin improperly secured

[10] In response to data request CalAdvocates-SCE-2025WMP-09, question 3, April 26, 2024, SCE provided a file, "HU-2023 1723 Cotter Key Pins_Redacted.pdf." The photos in Figure A and B are from the bulletin.

Figure B: Cotter pin missing



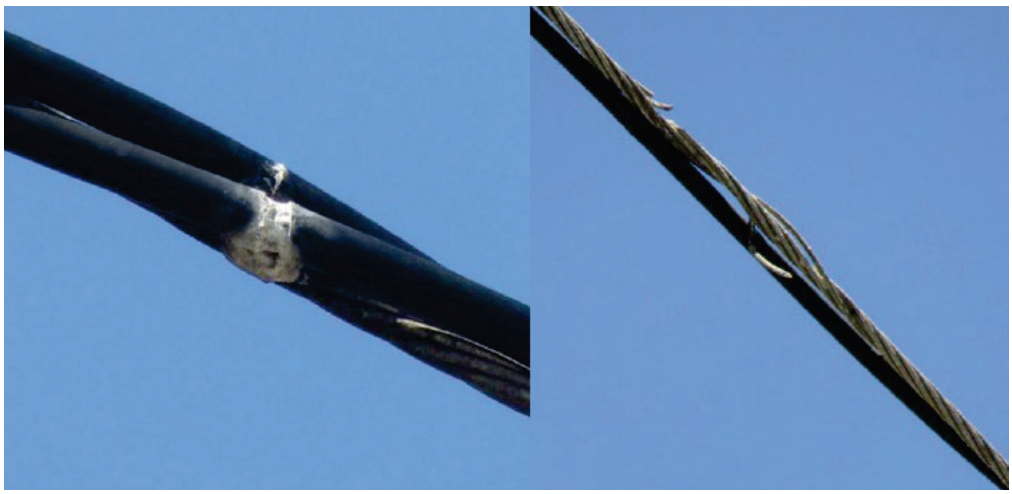
In addition to the cotter pin findings, 16 QC audits found the overhead detailed inspection failed to identify "secondary conductor damage," as shown in Figure C below.[11] This failure is significant because Cal Advocates' previous comments noted SCE's history of ignitions that were caused by secondary conductor failure.[12] In 2022, equipment failure was the primary cause of secondary ignitions, accounting for 70 percent of the reported incidents.[13]

[11] The picture in Figure C is from SCE's response to data request CalAdvocates-SCE-2025WMP-09, question 4, April 26, 2024.

[12] Cal Advocates, *Public Advocates Office's Opening Comments on the Draft Decision Approving Southern California Edison Company's 2023-2025 Wildfire Mitigation Plan*, September 19, 2023, in Docket 2023-2025-WMPs (Cal Advocates Comments on 2023-2025 WMP) at 5.

[13] SCE 2023 - 2025 WMP at 764.

Figure C: Secondary conductor damage



SCE asserts it has made efforts to enhance its asset inspection procedures to better address ignitions caused by secondary conductor failure. According to SCE, "it modified its inspection form to address open and aged conductor, animal contact, tree abrasion, overloading due to illegal growth, and overloading due to heat."[14] However, the results of the 2023 QA/QC for detailed inspections suggest that further progress is required.

The QC inspectors' identification of significant issues in 88 out of 194 non-conformances indicates a high rate of failure, flaws within SCE's inspection protocols, and possible training deficiencies. Given the concerning and unacceptable impact on public safety, SCE must address these issues promptly and effectively.

SCE's 2025 WMP Update fails to specify measures to correct critical deficiencies related to cotter pins and secondary conductor damage. The absence of a detailed analysis to identify the root causes of these failures further exacerbates the situation. Without understanding the underlying problems, SCE will not be able to devise effective corrective measures.

SCE should develop a comprehensive strategy to address failures in QC audit findings, to ensure robust oversight and corrective actions are implemented efficiently. SCE should submit this as a revision to its 2025 WMP Update.

SCE should conduct a thorough root cause analysis to understand why inspections are missing critical safety issues despite changes to training and procedures that are specifically

[14] Energy Safety, *Decision on 2023-2025 Wildfire Mitigation Plan of Southern California Edison*, October 24, 2023, in Docket 2023-2025-WMPs (Decision) at 49.

intended to find secondary conductor damage. Following this, SCE should update its training programs to ensure that inspectors are well-equipped to identify and report issues accurately.[15]

Implementing stricter audit procedures, possibly with third-party oversight, can enhance the objectivity and reliability of inspections. SCE should adopt a proactive approach to address the findings from the 2023 QA/QC audits of overhead detailed inspections. SCE needs to outline a clear strategy to not only address the risks associated with the findings of cotter pins and secondary conductor damage, but also prevent future shortcomings in overhead detailed inspections. This will require robust corrective measures and continuous improvement in inspection processes.

B. Energy Safety should direct SCE to improve its management of asset work orders, especially those that pose an ignition risk.

SCE currently faces significant challenges in the area of asset maintenance: a growing number of asset work orders, and a high number of ignition risk work orders in High Fire Threat District (HFTD) Tier 3 that are substantially past due.

1. SCE's total number of open asset work orders is rising.

SCE has had a notable increase in the number of open asset work orders on its electric distribution and transmission system This highlights a critical challenge in asset management. Recently, the trend of open work orders has been consistently upward. This indicates growing demands on the utility's operations and maintenance organizations, which may cause delays in addressing maintenance needs. This trend underscores the importance of enhancing SCE's operational strategies to effectively manage and reduce the backlog of work orders.

[15] SCE 2023 - 2025 WMP at 764.

Figure D: All Open Asset Work Orders

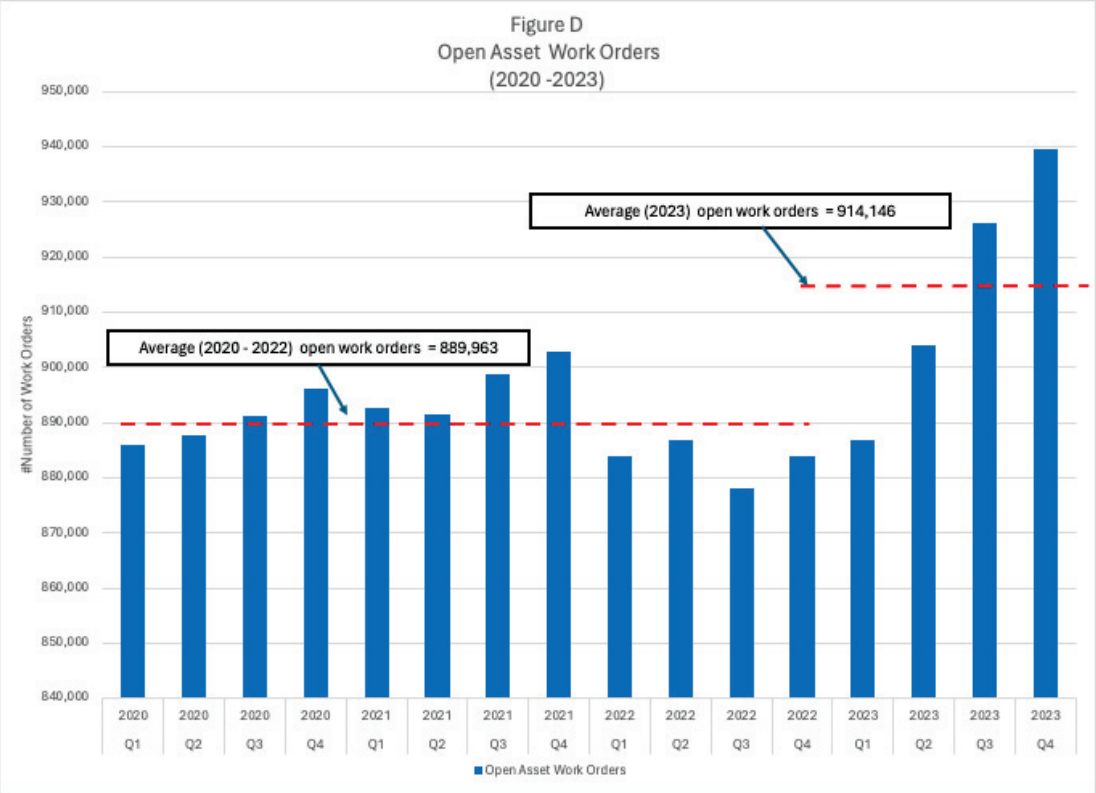


Figure D shows SCE's open work orders at the end of each quarter from 2020 through 2023.[16] The graph shows that the number of work orders averaged about 890,000 from 2020 through 2022, with no clear trend. However, beginning in the second half of 2022, there is an upward trend. The end-of-quarter figures averaged 914,146 for all of 2023 and reached nearly 940,000 at the end of the year.[17]

The increase in open asset work orders is due to SCE's enhanced inspections.[18] This is indicative of a broader issue: SCE is not able to promptly rectify potential hazards that it has identified. This situation highlights a need for SCE to realign its operations to improve asset

[16] SCE 4th Quarter 2023 Data Report, Table 2, Row 120. Average quarterly open work orders increased from 889,963 in 2020-2022 to 914,146 in 2023.

[17] The data in Figure D is from SCE 4th Quarter 2023 Data Report, Table 2, Row 120.

[18] SCE 2025 Wildfire Mitigation Plan Update (SCE 2025 WMP Update) at 72:

> The overall number of notifications due between 2020-2022 increased by 14% from the years 2017-2019 due to changes in SCE's inspection processes, such as inclusion of aerial inspections, increased inspections in HFRA, and enhanced detailed inspections.

management. First, SCE should allocate sufficient resources to asset repairs to ensure problems are corrected in compliance with required standards. Second, SCE should balance compliance repair work with a risk-informed approach to asset management.

2. SCE has a growing number of overdue work orders with ignition risk.

SCE reports an increasing number of past-due asset work orders with ignition risk between 2022 and 2023.[19] Figure E below shows that SCE had an average of 4,198 ignition-risk work orders at the end of each quarter in 2022. By 2023 this number had increased to 5,265 ignition-risk work orders.[20]

Figure E: Ignition Risk Past Due Work Orders

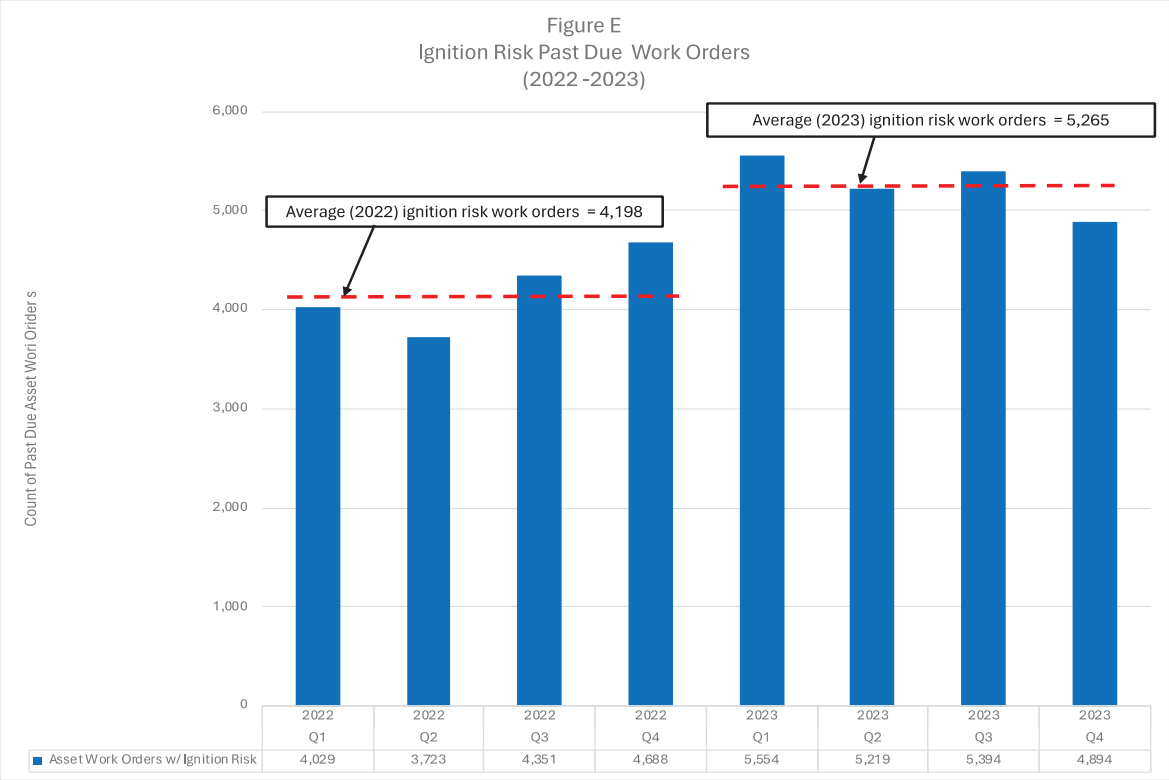


Figure E shows the number of overdue transmission and distribution asset work orders that SCE flagged as posing an ignition risk, from 2022 through 2023. These are point-in-time

[19] SCE 4th Quarter 2023 Data Report, Table 3, Row 13. Average quarterly total ignition risk work orders increased 25 percent from 4,198 in 2022 to 5,265 in 2023.

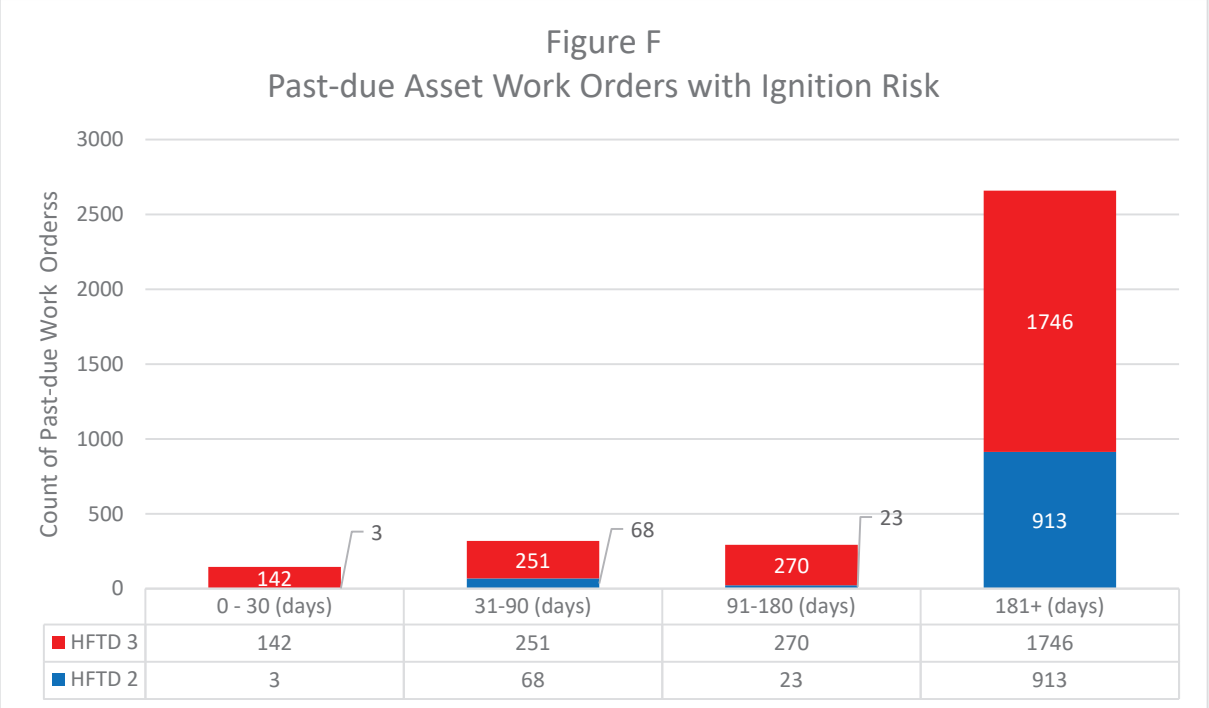
[20] The data in Figure E is from SCE 4th Quarter 2023 Data Report, Table 3, Row 13.

counts at the end of each quarter. In 2022, the end-of-quarter numbers averaged 4,198 overdue work orders with ignition risk. In 2023, SCE had an average of 5,265 such work orders, which represents a 25 percent increase in one year. This trend casts doubt on the effectiveness of SCE's current maintenance schedules and calls for a reassessment of SCE's asset management strategy.

3. SCE has many asset work orders in the most hazardous category: tags with ignition risk, located in HFTD Tier 3, and substantially overdue.

SCE has a substantial number of work orders that have multiple risk factors: flagged as posing an ignition risk, located in HFTD Tier 3, and greater than 180 days overdue.[21] This troubling situation is illustrated in Figure F below.[22] The 180-days-overdue milestone is crucial, as further delays could significantly increase the probability of equipment failures or ignitions that require an immediate response.

Figure F: Ignition-Risk Work Orders, Sorted by Days Overdue and HFTD tier



[21] SCE's response to data request CalAdvocates-SCE-2025WMP-03, question 17, April 12, 2024. SCE reports that it has 1,746 asset work orders that pose an ignition risk, are in HFTD Tier 3 areas, and are 181 days or more past due as of March 1, 2024.

[22] The data in Figure F is from SCE's response to data request CalAdvocates-SCE-2025WMP-03, question 17, April 12, 2024.

Figure F shows all SCE's overdue asset work orders that are located in the HFTD and pose ignition risks, as of March 1, 2024. Across the X-axis, these work orders are sorted into buckets by how much they are overdue. Vertically, each bar is split between HFTD tiers, with work orders in HFTD Tier 3 shown in red and work orders in Tier 2 shown in blue. The graph illustrates two crucial points. First, most of SCE's work orders matching these criteria are more than six months overdue.[23] Second, of the severely overdue work orders, about two-thirds are in HFTD Tier 3.[24] Overall, SCE has 1,746 work orders which are *severely overdue*, with an ignition risk, and in Tier 3. These tags have been open and unremediated at least twice as long as is acceptable.[25] Unfortunately, SCE's 2025 WMP Update does not provide an action plan to address this backlog of hazardous asset work orders.

SCE has identified several operational challenges to resolving past-due work orders, which include difficulties in accessing land, permit acquisition delays, and lack of cooperation from property owners and government entities.[26] Yet, neither SCE's discovery responses nor its 2025 WMP Update sheds light on the specific reasons why such a significant portion of work orders, especially those with ignition risks in HFTD Tier 3, have fallen so far behind schedule. The absence of a detailed analysis that pinpoints recurring issues or root causes suggests SCE does not yet fully understand the factors underlying this backlog.

SCE should carefully examine the causes of its backlog of ignition-risk work orders and develop a plan to correct it. It is crucial for SCE to identify causes and patterns, and then clearly communicate the measures it proposes to rectify the situation. This should include preventative strategies to prevent future accumulation of risky past-due work orders, as well as measures to resolve the existing backlog.

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[23] Per General Order (GO) 95, Rule 18.A.2(ii), Resolution of Safety Hazards and General Order 95 Nonconformances:

> Time period for corrective action to be determined at the time of identification by a qualified company representative, but not to exceed: (1) six months for potential violations that create a fire risk located in Tier 3 of the High Fire-Threat District.

[24] SCE reports that it has 2,569 past-due asset work orders, that pose an ignition risk, in HFTD, that are 181 days or more past due as of March 2024. 1,746 divided by 2,659 is 65.7 percent.

[25] For ignition-risk tags in HFTD Tier 3, General Order 95, Rule 18, sets a maximum of six months from when the issue is identified until it is remediated.

[26] SCE 2025 Wildfire Mitigation Plan Update (SCE 2025 WMP Update) at 73. These factors range from land access issues, to delays in acquiring permits, to roadblocks put in place by unresponsive property owners and government agencies.

4. Remedies: SCE should implement a comprehensive strategy to address open and past-due work orders.

Overall, SCE faces significant and growing challenges in the area of asset maintenance. SCE should develop a multi-faceted strategy to address its growing open asset work orders and past-due asset work orders with ignition risk, particularly those in HFTD Tier 3. In a revised 2025 WMP Update, SCE should propose a strategy to improve asset management. At the least, this plan should include the following:

- An operational evaluation to enable the timely resolution of asset maintenance needs, especially the riskiest work orders. SCE should:
  - Balance the urgent compliance repair work with system hardening in high risk areas.
  - Consider bolstering its workforce to deal with the growing backlog.
  - Increase the number of specialized inspection and repair crews dedicated to HFTD Tier 3 areas.
- SCE should collaborate with local governments, agencies, and property owners to create fast-track permitting processes for high-risk areas.
- SCE's work order prioritization should target the most critical issues first. SCE should prioritize work orders by their potential to cause fires or other public safety hazards, not just by how long they have been overdue. This may involve using more sophisticated predictive analytics to estimate ignition risk.
- SCE should set specific quarterly targets to decrease the numbers of total open asset work orders, ignition-risk work orders, and ignition-risk work orders that are severely overdue.

By implementing these recommendations, SCE can work towards significantly mitigating the risk posed by these overdue work orders, ensure operational efficiency and, most importantly, protect the public from wildfire hazards.

IV. RISK ASSESSMENT METHODS

A. Energy Safety should require SCE to examine the use of probabilistic models for its risk assessment strategy.

Energy Safety's decision approving SCE's 2023-2025 WMP requires the calculation of risk scores using maximum consequence values.[27] Specifically, ACI SCE-23-02 requires SCE to provide a plan for transitioning from using maximum consequences values to probability

[27] Energy Safety decision approving SCE's 2023-2025 WMP at 82-83 (ACI SCE-23-02).

distributions or, in the alternative, to demonstrate that its current methodologies provide accurate outputs and justify its current methods of calculating risk scores.[28]

In its 2025 WMP update, SCE continues to favor deterministic or maximum consequence risk modelling over probabilistic risk modelling, despite the requirements of ACI SCE-23-02.[29] SCE states that that maximum consequence values are necessary to identify catastrophic wildfires, which are difficult to predict using a normal probability distribution.[30]

1. SCE maintains its preference for maximum consequence values despite Energy Safety's directive to transition to probabilistic models.

Despite Energy Safety directives to explore more statistically robust risk-assessment methods, SCE persists in its current risk modelling approach,[31] which is not in compliance with Energy Safety's directives.[32] In its 2025 WMP update, SCE does not utilize a probabilistic risk modelling approach, nor does it present comparative analyses or validations that demonstrate the efficacy of deterministic risk assessment versus probabilistic risk assessment.[33], [34]

Furthermore, SCE has not taken any steps to explore the use of probability distributions in the future instead of maximum consequence values.[35] SCE has not engaged any independent third party to examine what would be required for this change, nor has it done any analyses internally.[36] Additionally, SCE has not performed any comparison studies between the two risk

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[28] Energy Safety decision approving SCE's 2023-2025 WMP at 82-83.

[29] SCE 2025 WMP Update at 35-43.

[30] SCE 2025 WMP Update at 35.

[31] SCE 2023-2025 WMP at 90.

> The IWMS Risk Framework is anchored on wildfire consequence should an ignition occur and does not adjust consequences based on the probability of ignition. SCE takes this approach because probability of ignition changes over time due to many variables such as age, loading, etc. Furthermore, in some locations the consequences of an ignition that leads to a wildfire may be so extreme that it is prudent to mitigate ignition risk regardless of probability.

[32] SCE 2025 WMP Update at 35-43.

[33] SCE's response to Data Request CalAdvocates-SCE-2025WMP-05, Question 2(l), April 16, 2024: "SCE uses deterministic, physics-based models, rather than probabilistic based models, and does not have the data to form the basis of a comparison."

[34] SCE 2025 WMP Update at 35-43.

[35] SCE Response to Data Request CalAdvocates-SCE-2025WMP-05, Question 1(a), April 16, 2024.

[36] SCE Response to Data Request CalAdvocates-SCE-2025WMP-05, Question 1(e), April 16, 2024.

modelling approaches and states that it does not have the resources to perform the level of analysis that would be necessary for a "compare and contrast" of SCE's current method relative to a probabilistic method.[37] Nonetheless, SCE speculates without evidence that such "a comparison would see general alignment in terms of which portions of its service territory are highest risk."[38]

2. SCE's exclusive reliance on maximum consequence values may lead to overstating and overlooking certain risks.

SCE's current approach to risk modelling relies on maximum estimated consequence values instead of the probabilistic analysis that is typically used for risk assessment. Energy Safety recognized the shortcomings of SCE's approach in its decision on SCE's 2023-2025 WMP. Energy Safety observed:

> SCE's use of maximum consequence values to aggregate risk scores at the asset or circuit level could lead to unrealistically high-risk scores at the territory level, and this may affect SCE's ability to optimally prioritize mitigations. Instead, mathematical standards support aggregating consequence values using probability distributions.[39]

Energy Safety should require SCE to revise and resubmit its 2025 WMP Update due to its inadequacy in addressing ACI SCE-23-02.[40] While SCE has expended effort to advocate for its current risk modelling methods, it has unequivocally disregarded Energy Safety's requirement to explore the use of probability distributions in the future.[41]

SCE continues to ignore probability in its risk modelling, which may have important real-world consequences. A flawed risk analysis introduces the risk of resource and time mismanagement. It is imperative that SCE perform the analyses and studies needed to compare and contrast deterministic and probabilistic risk modelling approaches before committing to using maximum consequence values.

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[37] SCE Response to Data Request CalAdvocates-SCE-2025WMP-05, Question 2(l), April 16, 2024.

[38] SCE Response to Data Request CalAdvocates-SCE-2025WMP-05, Question 2(l), April 16, 2024.

[39] Energy Safety decision approving SCE's 2023-2025 WMP at 24.

[40] Energy Safety decision approving SCE's 2023-2025 WMP at 82-83.

[41] SCE 2025 WMP Update at 35-43.

V. SYSTEM HARDENING TARGETS

A. Energy Safety should require SCE to justify its proposed deferral of system hardening targets and its ambitious REFCL targets.

1. SCE proposes to reduce its system hardening targets for 2025.

SCE's 2025 WMP Update proposes to revise SCE's 2025 targets for the deployment of covered conductors, undergrounding, and Rapid Earth Fault Current Limiters (REFCL).[42] SCE's original 2025 targets (set in SCE's 2023-2025 WMP) for covered conductor were 700 circuit miles as a "compliance target" and 850 circuit miles as a "strive target."[43] SCE's 2025 WMP Update proposes to reduce these targets to 500 and 600 circuit miles respectively, which corresponds to a reduction of about 29 percent.[44] SCE argues that it has outperformed its WMP targets for covered conductor in 2022 and 2023, and this overperformance reduces the necessity to complete the miles in 2025. SCE therefore plans to complete some of the mileage in later years.[45]

SCE's 2023-2025 WMP sets a target of 48 circuit miles for undergrounding overhead conductor.[46] SCE's 2025 WMP Update proposes to reduce this to 30 circuit miles, corresponding to a reduction of 38 percent.[47] SCE explains that the extensive review process in its Integrated Wildfire Mitigation Strategy (IWMS) framework, combined with obtaining land rights and various approvals, means that a limited amount of mileage will be ready for execution in 2025.[48] SCE expects this constraint to ease starting in 2026.[49]

SCE's 2023-2025 WMP set a compliance target to construct REFCL Ground Fault Neutralizers (GFN) at four substations. SCE's 2025 WMP Update proposes to decrease this

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[42] SCE 2025 WMP Update, at 26: SCE Table 2-11 – 2025 Target Changes.

[43] SCE 2023-2025 WMP at 238.

[44] SCE 2025 WMP Update at 26: SCE Table 2-11 – 2025 Target Changes.

[45] SCE 2025 WMP Update at 27.

[46] SCE 2023-2025 WMP at 238.

[47] SCE 2025 WMP Update at 26: SCE Table 2-11 – 2025 Target Changes.

[48] SCE 2025 WMP Update at 27.

[49] SCE 2025 WMP Update at 27.

target to two substations.[50] However, SCE maintains its "strive target" to complete the construction of GFN at four substations.[51]

2. SCE plans to defer system hardening without adequate detail on interim risk management or specific completion dates.

SCE defers substantial system hardening target miles to future years but does not provide detail on managing the interim risks. Communities where system hardening targets are deferred face continued exposure to wildfire risks.

SCE has not demonstrated adequate interim risk mitigation strategies. In particular, in areas where SCE plans to perform undergrounding, SCE states that it will use risk-prioritized inspections, vegetation management, and fast curve settings to reduce risk during the interim period before targeted undergrounding is completed.[52] SCE estimates that these measures will mitigate risk by 46 percent.

However, SCE's interim risk management measures are not unique to areas that are scoped for system hardening. SCE states that these mitigation measures will also be performed in areas without plans for hardening, but at different frequencies based on the results of its risk assessment with IWMS.[53] The absence of distinct interim measures indicates that SCE does not have a concrete plan to address interim risk in areas where system hardening is deferred; rather, SCE plans to continue normal operations in those areas, albeit with a possible change in frequency.

Furthermore, in the 2025 WMP Update discussion regarding covered conductor miles, SCE simply says deferred system hardening will be completed in "later years."[54] SCE provides no definitive timeline to complete these projects.[55]

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[50] SCE 2025 WMP Update at 26: SCE Table 2-11 – 2025 Target Changes.

[51] SCE 2025 WMP Update at 27-28.

[52] SCE Response to Cal Advocates Data Request 2025WMP-05, Question 3(a), April 10, 2024.

[53] SCE Response to Cal Advocates Data Request 2025WMP-05, Question 3(g), April 10, 2024.

[54] SCE 2025 WMP Update at 27.

[55] SCE 2025 WMP Update at 27.

3. SCE's ambitious REFCL target for 2025 may be overly optimistic.

SCE has acknowledged past challenges with REFCL implementation due to its complexity and the technical challenges of integrating REFCL into existing grid infrastructure.[56] In response to discovery, SCE adds that it is working to resolve challenges at five substations in implementing REFCL technologies.[57] These technical challenges affect SCE's 2025 REFCL goals.[58]

Setting targets without resolving past difficulties introduces the possibility of repeated implementation challenges. SCE's REFCL program has consistently faced operational challenges in the last two years, including a recurring series of technical difficulties and delays.[59] This pattern suggests that the ambitious 2025 targets might have been set prematurely, without implementing corrective actions. Given SCE's past challenges with implementing REFCL technologies, SCE may experience resource mismanagement and could forgo more immediate alternatives that possess similar benefits at lower costs.

SCE proposes ambitious targets for REFCL without any evidence of implementation successes to date. As a result, SCE's targets appear optimistic rather than practical.

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[56] SCE 2025 WMP Update at 27-28.

[57] SCE Response to Data Request CalAdvocates-SCE-2025WMP-04, Question 3(e) and 3(f), April 10, 2024.

[58] SCE Response to Data Request CalAdvocates-SCE-2025WMP-04, Question 3(e) and 3(f), April 10, 2024.

[59] SCE Response to Data Request PubAdv-SCE-257-MGN, Question 1(a), November 14, 2023:

> Factors such as the amount of phase-to-neutral connected load, the vintage of underground facilities, substation space to accommodate REFCL, substation bus design, the amount of distribution surge arresters, and the quantity of circuits along with circuit lengths are major factors that contribute to variations in substation project complexity and project lead times. While various delays can occur in a large REFCL GFN project, the following list provides examples of critical path delays which were longer than anticipated for the 2023 project(s):
>
> - Material Availability
> - Existing equipment failure
> - Inaccurate underground survey

4. Remedies: Energy Safety should require SCE to revise its 2025 WMP update with sufficient detail on deferring system hardening miles into future years and more detail on its REFCL targets.

Energy Safety should direct SCE to revise its 2025 WMP Update before the end of this year to address the shortcomings in its system hardening plans. Specifically, SCE should provide sufficient detail on its plans to defer 2025 covered conductor and targeted undergrounding miles into future years. SCE's revised 2025 WMP Update should include an interim risk management strategy for the deferred 2025 covered conductor and targeted underground locations; interim risk mitigations should be commensurate with the level of risk experienced in those areas. Additionally, SCE should revise its 2025 WMP Update with more realistic REFCL targets. SCE should support its proposed targets with an analysis of the pace and scale of work that is feasible. This analysis should specifically address each of the challenges SCE has encountered to date in REFCL implementation.[60]

VI. CONCLUSION

Cal Advocates respectfully requests that Energy Safety adopt the recommendations discussed herein.

Respectfully submitted,

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May 7, 2024

[60] SCE Response to Data Request CalAdvocates-SCE-2025WMP-04, Question 3(g), April 10, 2024.