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April 26, 2023

Lucy Morgans
Program Manager, Electric Safety Policy Division
Office of Energy Infrastructure Safety
715 P Street, 20th Floor
Sacramento, CA 95814

SUBJECT: SCE's Submission of Non-Substantive Errata for the 2023-2025 Wildfire Mitigation Plan

Dear Program Manager Morgans:

SCE appreciates the opportunity to submit non-substantive errata to its 2023-2025 Wildfire Mitigation Plan (WMP).

In the table beginning on the following page, SCE has provided additional corrections to supplement the corrections submitted on April 6, 2023. SCE notes that none of the errors identified in this submission materially impact the content or meaning of its WMP.

SCE has provided redlines to address each error. The redlines are based on the WMP submitted to the Office of Energy Infrastructure Safety on March 27, 2023 (version "R0").

SCE also notes that in its cover letter for errors submitted on April 6, SCE stated that VM-4 operates in both HFRA and non-HFRA. This statement was incorrect, as VM-4 only operates in HFRA. The corrections that SCE provided for Table 8-15 were correct and do not require further changes.

SCE's WMP and associated materials are available at: <https://www.sce.com/safety/wild-fire-mitigation>.

SCE appreciates the opportunity to submit these corrections. If you have questions, or require additional information, please contact me at connor.flanigan@sce.com.

Sincerely,

//s//

Connor Flanigan
Managing Director, State Regulatory Operations
connor.flanigan@sce.com

TABLE OF ERRATA

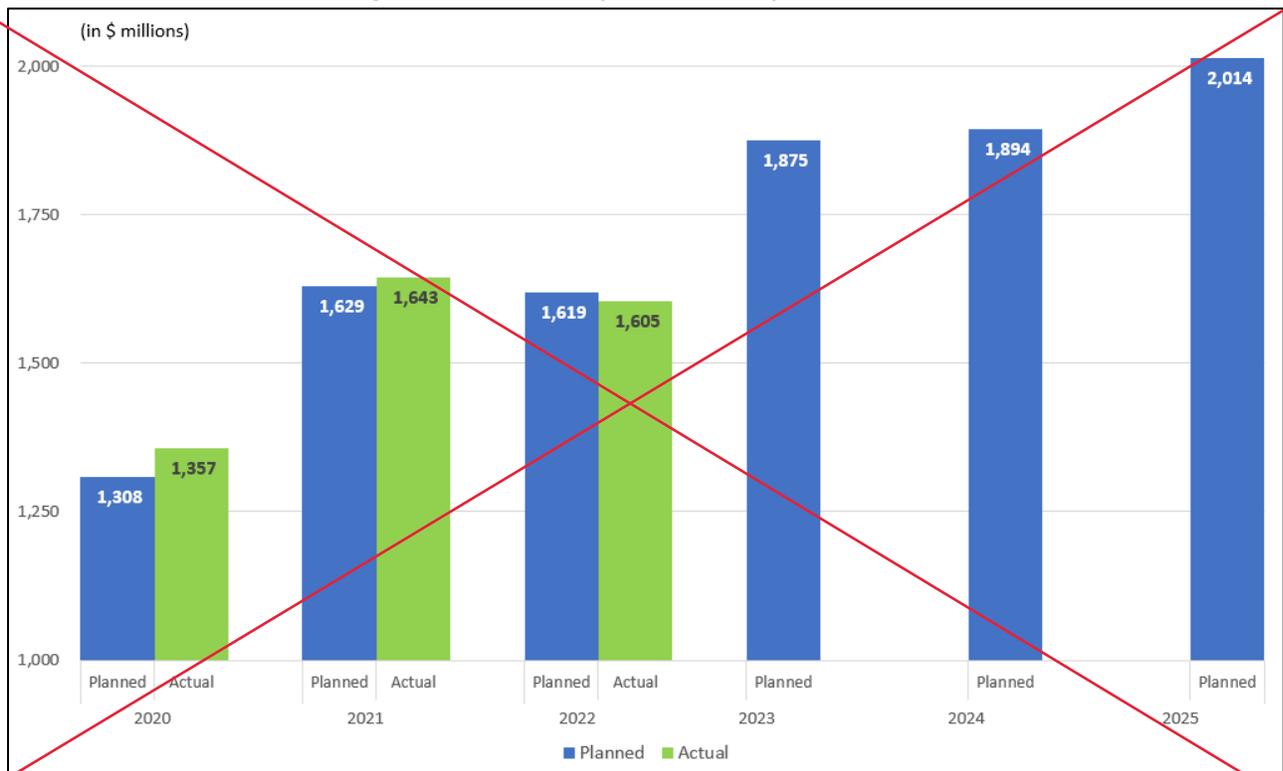
Substantive? (Y/N)	Section	Table or Figure (if applicable)	Page Number(s)	Description of error and correction
N	4.3	Table 4-1 & Figure SCE 4-01	22	SCE has corrected financial data.
N	7.1.3	Table 7-2	189-190	In its submission of errors on April 6, SCE incorrectly calculated the ratio of overall utility risk per HFRA mile for Severe Risk Areas and for High Consequence Areas.
N	8.1.1.2	Table 8-3	238	SCE has corrected the SRA/HCA percentage for SH-1 for 2024.
N	8.1.9.1	N/A	344	SCE has corrected the additional minimum qualifications for the Electrical System Inspector role.
N	8.2.1.1	Table 8-13	376	Table 8-13 was incorrectly labeled.
N	8.2.5	Table SCE 8-11	429	SCE has corrected the table column labels.

Redlines of the 3/27/23 WMP to address errors identified in the table above begin on the following page.

Table 4-1 - Summary of WMP Expenditures¹²

Year	Spend (thousands \$USD)
2020	Planned (as reported in 2020 WMP update) = \$1,308,269 Actual = \$1,356,923 ±Δ = \$48,654
2021	Planned (as reported in 2021 WMP Update) = \$1,629,377 Actual = \$1,642,980 ±Δ = \$13,603
2022	Planned (as reported in 2022 WMP Update) = \$1,619,252 Actual = \$1,604,753 \$1,599,912 ±Δ = \$14,499 \$19,340
2023	Planned = \$1,875,269 \$1,869,997
2024	Planned = \$1,893,642 \$1,887,446
2025	Planned = \$2,013,617 \$2,006,300

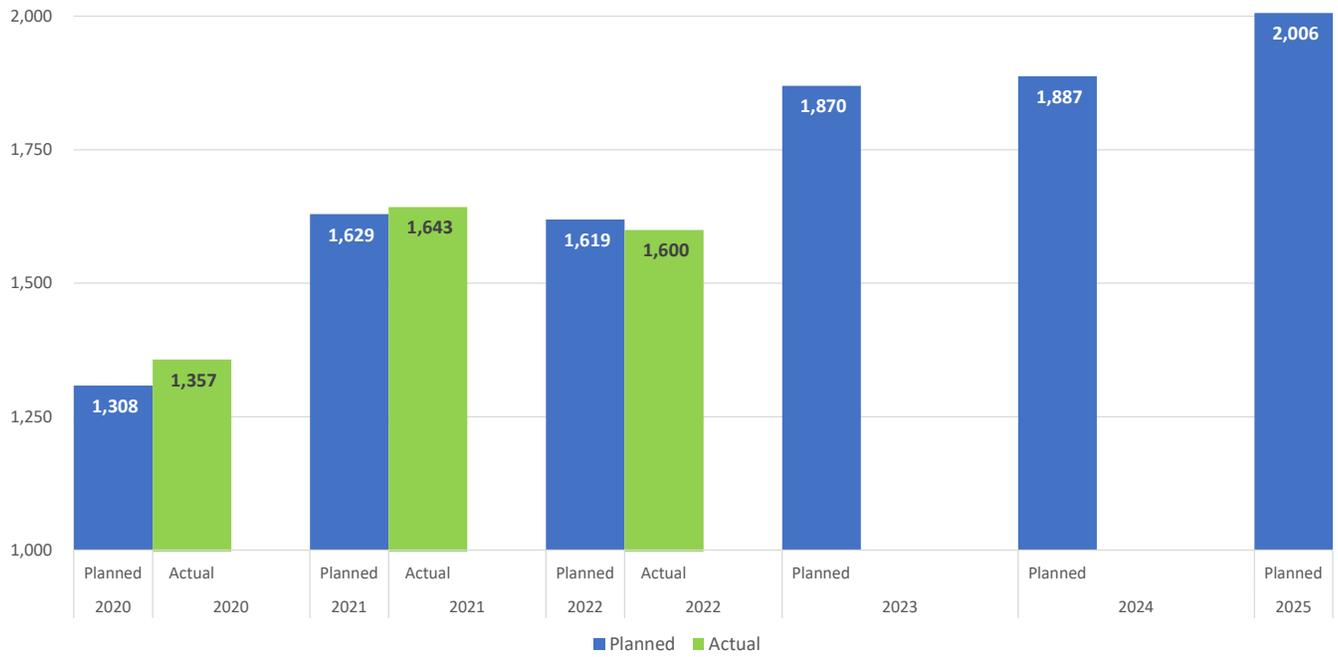
Figure SCE 4-01 - Graph of WMP Expenditures



See updated graph on following page

¹² The summary of WMP Expenditures reflects direct capital and O&M costs for wildfire activities which correspond to the HFTD spend as shown in Table 11 of the QDR. The dollars are nominal.

Figure SCE 4-01 - Graph of WMP Expenditures



<ul style="list-style-type: none"> ○ Communities of Elevated Fire Concern (CEFCs) – smaller geographic areas where terrain and other factors could lead to smaller, fast-moving fires threatening populated locations under benign (normal) weather conditions.
High Consequence Area Criteria
<ul style="list-style-type: none"> ○ Not identified in meeting Severe Risk Area criteria. ○ Destructive fire consequence – Acres burned consequence between 300 and 10,000 over an 8-hour unsuppressed model simulation. ○ Locations subject to PSPS events in which covered conductor has not been fully deployed.
Other HFRA Criteria
<ul style="list-style-type: none"> ○ Not identified in meeting Severe Risk Area or High Consequence criteria. ○ Small fire consequence - Acres burned consequence less than 300 over an 8-hour unsuppressed model simulation.

Review and Revision: A team of SMEs reviews, refines, and revises the output of the Initial Risk Categorization, by reviewing unhardened circuit segments with additional tools such as inspection photos and maps to determine if local conditions change the initial categorization. This process is ongoing and expected to be complete in Q1 2024.

List of Prioritized Areas: Below is SCE’s list that identifies, describes, and prioritizes areas of its service territory at risk from wildfire for potential mitigation initiatives based solely on overall utility risk, including the associated risk drivers.

Table 7-2 - List of Prioritized Areas in SCE’s Service Area Based on Overall Utility Risk

Priority	Area/ Tranche	Description ¹¹⁰	Overall Utility Risk ¹¹¹	Associated Risk Drivers
1	Severe Risk Areas	Locations with egress challenges, areas that fires have historically propagated towards (burn-in buffer), CEFCs, areas with extreme high winds, and segments with extreme Technosylva consequence (i.e., greater than 10,000 acres in eight hours with simulated wildfire ignition consequence). ~1,520 of ~ 2,925 2,950 total miles already hardened*	52.08 (0.019 risk per HFRA mile) 52.41 (0.018 risk per HFRA mile)	<ul style="list-style-type: none"> • EFF • CFO Other • CFO Veg <div style="border: 1px solid red; padding: 2px; width: fit-content; margin-top: 10px;">this correction as of 4/26/23</div>
2	High Consequence Areas	Segments not identified as a Severe Risk Areas are and in which simulated wildfire ignitions resulted in a wildfire consequence of 300-acres-or greater	64.85 (0.016 risk per HFRA mile)	<ul style="list-style-type: none"> • EFF • CFO Other • CFO Veg

¹¹⁰ Hardened miles as of 12/31/2022 for all risk tranches. SCE may revise this data to reflect adjustments based on comparing completed work orders to mapping data, and also pending completion of SCE’s Review & Revise stage of IWMS.

¹¹¹ MARS units as of January 2023. Reflects mitigations and hardening in place.

Priority	Area/ Tranche	Description ¹¹⁰	Overall Utility Risk ¹¹¹	Associated Risk Drivers
		in eight hours, as well as those circuits which have the potential to be frequently impacted by PSPS events. ~2,285 of ~ 4,275 4,400 total miles already hardened*	64.86 (0.015 risk per HFRA mile)	this correction as of 4/26/23
3	Other HFRA	Encompasses SCE overhead distribution lines that are located in HFRA but that are neither High Consequence Areas nor Severe Risk Areas. ~605 of ~ 2,400 2,250 total miles already hardened*	6.37 (0.003 risk per HFRA mile) 6.03 (0.003 risk per HFRA mile)	<ul style="list-style-type: none"> • EFF • CFO Other • CFO Veg

* “Hardened miles” refer to the miles of bare overhead lines replaced with covered conductor or underground cable and the associated infrastructure to complete those installation (i.e., FR pole as part of covered conductor installation). In some cases, alternatives such as REFCL, aerial bundled cable, or spacer cable are utilized.

Feasibility Review: After a part of SCE’s system is assigned a mitigation, it undergoes a feasibility review. The extent of the review depends on the mitigation, some mitigations require more intensive reviews than others. For example, replacing a vertical switch may not require more than one person to determine feasibility. On the other hand, a group of planners and engineers review TUG scope for feasibility, as there are multiple situations (terrain, ROWs over private property, customer meter locations, etc.) that can influence a TUG project. Further, when planning and scheduling work, SCE considers issues such as engineering and crew resource availability (both internal and external), permitting, logistical viability of potential mitigations, operational needs, local grid configurations, potential for customer outage fatigue, work bundling and other factors.

7.1.4 Mitigation Selection Process

After the electrical corporation creates a list of top-risk contributing circuits/segments/spans (Section 6.4.2) and prioritized areas based on overall utility risk (Section 7.1.3), the electrical corporation must then identify potential mitigation strategies. It must also evaluate the benefits and drawbacks of each strategy at different scales of application (e.g., circuit, circuit segment, system-wide). In this section of the WMP, the electrical corporation must provide the basis for its decisions regarding which mitigation initiatives to pursue. It must also document how it develops, evaluates, and selects mitigation initiatives.

The electrical corporation should consider appropriate mitigation initiatives depending on the local conditions and setting and the risk components that create the high-risk conditions. There may be a wide variety of potential mitigation initiatives, such as:

- Engineering changes to grid design
- Discretionary inspection and/or maintenance of existing assets
- Vegetation clearances beyond minimum regulatory requirements

Table 8-3 - Grid Design, Operations, and Maintenance Targets by Year

Initiative Activity	Tracking ID	2023 Target & Unit	x% Risk Impact 2023 (Unit /HFRA)	% in SRA/HCA 2023	2024 Target & Unit	x% Risk Impact 2024 (Unit /HFRA)	% in SRA/HCA 2024	2025 Target & Unit	x% Risk Impact 2025 (Unit /HFRA)	% in SRA/HCA 2025	Method of Verification
Covered Conductor	SH-1	Install 1,100 circuit miles of covered conductor in SCE’s HFRA SCE will strive to install up to as many as 1,200 circuit miles of covered conductor in SCE’s HFRA, subject to resource constraints and other execution risks	51% / 21% 20%	91%	Install 1,050 circuit miles of covered conductor in SCE’s HFRA SCE will strive to install up to as many as 1,200 circuit miles of covered conductor in SCE’s HFRA, subject to resource constraints and other execution risks	53%/ 7% 6%	82% 91% this correction as of 4/26	Install 700 circuit miles of covered conductor in SCE’s HFRA SCE will strive to install up to as many as 850 circuit miles of covered conductor in SCE’s HFRA, subject to resource constraints and other execution risks	53%/3% 51%/4%	79% 80%	Listing of completed Work Orders
Undergrounding Overhead Conductor	SH-2	Convert 11 circuit miles of overhead to underground in SCE's HFRA	97% /.22% 98%	100%	Convert 16 circuit miles of overhead to underground in SCE's HFRA SCE will strive to convert up to 20 miles of overhead to underground in SCE's HFRA, subject to resource constraints and other execution risks	98%/ .37% .64%	100%	Convert 48 circuit miles of overhead to underground in SCE's HFRA SCE will strive to convert up to 60 miles of overhead to underground in SCE's HFRA, subject to resource constraints and other execution risks	97% /.9% 98%	98% 100%	Listing of completed Work Orders
Branch Line Protection strategy	SH-4	Install or replace fusing at 500 fuse locations that serve HFRA circuitry SCE will strive to install or replace fusing at up to 570 locations that serve HFRA circuitry, subject to resource constraints and other execution risks	7%/.31%	97%	N/A – Sunsetting in 2023, further fuse replacements will be completed via opportunity work	N/A	N/A	N/A – Sunsetting in 2023, further fuse replacements will be completed via opportunity work	N/A	N/A	Listing of completed Work Orders

General Minimum Qualifications:

Workers who conduct detailed transmission, distribution overhead (or underground) and aerial electrical inspections must have knowledge of the basic uses and functions of electrical equipment, hand tools, power tools, techniques in performing electrical system inspections and repairs. Workers must understand the fundamentals of electric circuitry and operation of electrical equipment. Further, workers must understand SCE standards, policies and procedures, and basic GO 95 requirements.

A Qualified Electrical Worker (QEW) is an individual who has a minimum of two years' training and experience with exposed high voltage circuits and equipment and demonstrated familiarity with the services to be performed and the hazards involved. In addition, for roles where it is applicable, SCE specifies in its contracts with vendors that the contractors at a minimum should meet the qualifications for a QEW as defined by the International Brotherhood of Electrical Workers (IBEW) Local No 47. SCE also specifies that contractors that perform Journeyman Lineman tasks on SCE's Distribution system must be certified "Journeyman Linemen" as determined by criteria set forth by IBEW Local No 47.

Additional Minimum Qualifications:

ELECTRICAL SYSTEM INSPECTOR: Responsible for performing inspections of distribution poles and equipment and ~~must have either a certificate of completion from an accredited trade school or at least one year of experience in construction/maintenance work in electrical distribution; must pass the required Edison Electric Institute (EEI) aptitude test as well as have the ability to obtain and maintain a California driver's license.~~ Inspectors must also have knowledge of: Basic electricity and electrical distribution principles; computer programs and email systems; company work rules, regulations and policies, construction methods, procedures, and standards; SCE's Accident Prevention Manual and safe work practices; and the motor vehicle code.

JOURNEYMAN TRANSMISSION/DISTRIBUTION LINEMAN: Responsible for performing construction and maintenance work on overhead and underground facilities. Journeyman linemen are QEWs and must have working experience as a lineman or groundman and graduated from SCE's apprenticeship program and have working knowledge of SCE's Accident Prevention Manual. Linemen must also have successfully passed a pre-hire physical assessment. Skills and abilities required by this job are of a level normally acquired by completion of job-related high school courses and the apprenticeship program for Lineman.

PATROLMAN: Responsible for patrolling, inspecting, and ensuring assigned transmission lines are properly maintained. Transmission Senior Patrolmen are QEWs and must have knowledge of: equipment, tools, techniques, and methods employed in the construction, installation, maintenance, and repair of overhead line facilities, roads, trails, and rights-of-way (ROWS); stresses, strains, and rigging; safety regulations; capabilities and limitations of insulator washing equipment; transmission overhead and underground circuitry and switching; and SCE's Accident Prevention Manual. The knowledge, skills, and abilities required for this job are of a level comparable with those normally acquired through a high school education, supplemented by technical study, extensive training, and experience as a journeyman, patrolman or lineman.

Note: An asterisk indicates that the electrical corporation exceeds a particular code, regulation, standard, or best practice. The electrical corporation must provide a reference to the appendix section and page providing further documentation, justification, and substantiation.

Table 8-13 - Vegetation Management Implementation Objectives (3 10-year plan)

Objectives for Ten Years (2026–2032)	Applicable Initiative(s), Tracking ID(s)	Applicable Regulations, Codes, Standards, and Best Practices (See Note)	Method of Verification (i.e., program)	Completion Date	Reference (section & page #)
Replace a majority of ground inspection for vegetation line clearing in HFRA with remote sensing technology (e.g., LiDAR, satellite), subject to the evolution and effectiveness of the technology	LiDAR (VM-9, VM-10), Satellite Technology	GO 95, Rule 35, Tree Trimming Guidance	Total Number of HFRA miles of vegetation inspections performed with remote sensing and total reduction in ground inspections.	2033	Section 8.2.2.4 Remote Sensing Inspections, pp. 398-408
Create and implement predictive growth model to facilitate "auto prescription" to reduce the frequency of manual or remote inspection in HFRA.	LiDAR (VM-9, VM-10), Satellite Technology	GO 95, Rule 35, Tree Trimming Guidance	Total Number of HFRA miles auto-prescribed trims, reduction in ground inspections.	2033	Section 8.2.2.4 Remote Sensing Inspections, pp. 398-408
Optimize vegetation inspection cycles/prescriptions based on risk factors (e.g., species, wind) for more granular locations	Routine Line Clearing (VM-7, VM-8), HTMP (VM-1), Dead & Dying Tree Removal (VM-4)	GO 95, Rule 35, Tree Trimming Guidance	Updated vegetation protocols with revised inspection schedule and/or trim instructions to account for risk analysis	2028	Section 8.2.3.3.1 Expanded Clearing, pp. 412-418 Section 8.2.3.4 Fall-In Mitigation, pp. 418-422
Obtain and implement programmatic permits to facilitate timely vegetation management work execution	Routine Line Clearing (VM-7, VM-8), HTMP (VM-1), Dead & Dying Tree Removal (VM-4)	Relevant environmental regulations	Programmatic permit documents that were executed	2026-2028	Section 5.4.5 - Environmental Compliance and Permitting, pp. 83-88

Note: An asterisk indicates that the electrical corporation exceeds a particular code, regulation, standard, or best practice. The electrical corporation must provide a reference to the appendix section and page providing further documentation, justification, and substantiation.

- *How the sample sizes are determined and how the electrical corporation ensures the samples are representative.*

For Distribution line clearing, VM QC sampling is performed on a circuit mile basis. SCE uses a combination of risk-based (through its TRI risk model) and judgmental sampling²¹⁴ for this activity and applies varying Confidence Levels (CL) and Confidence Intervals (CI). First, sampling is performed using SCE’s TRI risk model which identifies four specific risk categories: A, B, C and D, with A being the highest risk tranche. The table below identifies the four risk categories and planned circuit miles to be inspected. 100% of Category A High Fire Risk miles will inspected, when practical, and miles within Category B, C & D will be inspected using a Confidence Level / Confidence Interval of 99/3%.

Table SCE 8-11 – Distribution Circuit Mile Inspections

Distribution HFRA & State Responsibility Area (SRA)				
TRI Category	HFRA & SRA	Total Miles	CL/CI %	Miles Inspected
A	4718	4718	100%	4718
B	2332	5788	99/3	1402
C	1887			
D	1569			
Total	10506		N/A	6120

With these risk-informed sampling volumes established, SCE then performs judgmental sampling to determine which miles to inspect. Judgmental sampling is performed in lieu of random sampling because VM QC is required to verify that work performed by all VM inspection and trimming contractors meets SCE and regulatory compliance requirements. This allows for an appropriate balance of QC inspections across the contractors that perform work.

For Transmission line clearing activities, sampling is performed on a circuit mile basis. Sampling for Transmission miles is performed using judgmental sampling and a CL/CI of 99/5%. Section 4.4 in UVM-07 provides the sampling strategy in more detail.

For VM’s Hazard Tree and Dead and Dying Tree programs, 100% QC is performed to verify the remediation was performed. Additionally, for SCE’s Hazard Tree program, independent QC tree assessments are performed to provide assurance the assessments performed by the Hazard Tree assessments are accurate. QC typically samples assessments that had a risk score of between 35 to 49 (the typical threshold where mitigation was not required) providing added assurance the trees requiring mitigation were not missed. QC sampling for the independent risk assessments is performed using a CL/CI of 99/2%.

Additionally, for Structure Brushing, in 2023 QC inspectors will focus structure brushing QC on Distribution structures subject to Public Resource Code 4292. The intent of the QC will be to confirm: (1)

²¹⁴ Judgmental sampling is a type of non-random sample that is selected based on the opinion of an expert. Results obtained from a judgment sample are subject to some degree of bias, due to the frame and population not being identical.