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May 1, 2022

OFFICE OF ENERGY INFRASTRUCTURE SAFETY OF THE CALIFORNIA NATURAL RESOURCES AGENCY

SUBJECT: Southern California Edison Company's Quarterly Notification Pursuant to Public Utilities Code Section 8389(e)(7) Regarding the Implementation of Its Approved Wildfire Mitigation Plan and Its Safety Culture Assessment and Safety Recommendations

Southern California Edison Company (SCE) hereby submits this Notification detailing the implementation of its 2022 Wildfire Mitigation Plan (WMP) Update,¹ recommendations of the most recent safety culture assessment, a statement of the recommendations of its board of directors' safety committee² (Committee) during meetings that occurred during the first quarter of 2022, and a summary of the implementation of Committee recommendations in the first quarter of 2022 from previous meetings.

PURPOSE

The purpose of this Notification is to comply with the provisions of Public Utilities Code (PUC) Section 8389(e)(7), established by California Assembly Bill (AB) 1054 as amended by AB 148.

¹ Public Utilities Code Section 8389 requires a quarterly notification detailing the implementation of a utility's approved WMP. SCE is reporting on the implementation of its 2022 WMP Update, which is pending approval. SCE's Q4 2021 Quarterly Notification (submitted February 1, 2022) and SCE's 2021 Annual Report on Compliance (ARC, submitted March 31, 2022) provide details on implementation of SCE's approved 2021 WMP Update.

² SCE's board of directors' safety committee is known as the Safety and Operations Committee of the Board of Directors and referred to herein as the "Committee."

BACKGROUND

AB 1054 was signed into law by Governor Newsom on July 12, 2019 and AB 148 was signed into law on July 22, 2021. Section 8389(e)(7), which was added to the PUC by AB 1054 as amended by AB 148, reads:

The Director of the Office of Energy Infrastructure Safety shall issue a safety certification to an electrical corporation if the electrical corporation provides documentation of the following: ... The electrical corporation is implementing its approved wildfire mitigation plan. The electrical corporation shall file a notification of implementation of its wildfire mitigation plan with the office and an information-only submittal with the commission on a guarterly basis that details the implementation of both its approved wildfire mitigation plan and recommendations of the most recent safety culture assessments by the commission and office, and a statement of the recommendations of the board of directors safety committee meetings that occurred during the guarter. The notification and information-only submittal shall also summarize the implementation of the safety committee recommendations from the electrical corporation's previous notification and submission. If the office has reason to doubt the veracity of the statements contained in the notification or information-only submittal, it shall perform an audit of the issue of concern. The electrical corporation shall provide a copy of the informationonly submittal to the office.³

SCE provides the required information below:

(1) Implementation of Wildfire Mitigation Plan

On February 18, 2022, SCE submitted its 2022 WMP Update (Update). The Update included discussion of 2022 programs and activities, as well as successes and lessons learned from 2021.

In 2022, SCE is tracking 39 specific wildfire-related activities and ten additional vegetation management targets that constitute its Update, including additional grid hardening, enhanced inspection and repair programs, continuation of robust vegetation management, increased situational awareness and response, and augmented activities for Public Safety Power Shutoff (PSPS) resilience and community engagement, particularly for underrepresented groups and access and functional needs customers.

In Attachment A (SCE's 2020-2022 Wildfire Mitigation Plan Progress Update – Q1 2022), SCE presents detailed information about the implementation status of each of these wildfire-related mitigation activities. As referenced in Attachment A, SCE is currently on track to substantially meet the 2022 year-end targets set forth in its Update, but notes that four activities are currently behind plan for the quarter due to circumstances such as vendor delays, resource

³ Pub. Util. Code § 8389(e)(7).

constraints, customer program eligibility and weather. These four activities are likely to meet year-end targets.

(2) Implementation of Most Recent Safety Culture Assessment

Energy Safety initiated its 2021 Safety Culture Assessment (SCA) process for electrical corporations and conducted its first assessment for SCE on June 14, 2021. SCE partnered with OEIS and DEKRA, its third-party administrator, to complete the organizational self-assessment, workforce safety culture survey, and accompanying focus groups. On September 2, 2021, Energy Safety issued the 2021 SCA Report for SCE⁴ and SCE is implementing the findings and recommendations in the SCA report.

Addressing recommendation one, update current safety leader activities to address issues noted by the workforce concerning wildfire communications, roles, and decisions, SCE has:

- Conducted a communication assessment to identify depth of engagement and will evaluate the results to determine refinements to the current approach. Continued to communicate updates with impacted stakeholders and provided targeted training to supplement updates as needed.
- Trained field personnel performing in-event wildfire mitigations to immediately call in and report hazards to the jurisdictional switching center and active PSPS IMT. The PSPS Field Photo Requirement Policy and associated training instructs field observers to take pictures of hazards and upload photos into their field reporting tools. This data can be later retrieved to continuously improve operations, as evidence of our company's commitment to mitigating the risk of wildfire, and to communicate with SCE customers and communities how PSPS helped avoid ignitions.
- Conducted employee interviews to identify areas of improvement in communications with field employees supporting wildfire mitigation activities. Transitioning into the next phase of engagement plan to analyze data collected to develop an understanding of emerging themes. After completing this analysis, SCE will develop an action strategy to target employee concerns.

Addressing recommendation two, use Safety Culture Pulse Surveys to evaluate progress of supervisors in engaging frontline workers on wildfire hazards and providing clear communication about wildfire-related procedures, SCE has:

• Administered an ongoing quarterly Pulse Survey to monitor the effectiveness of PSPS organizational change management efforts and wildfire communication improvements. Responses will be monitored quarterly and will inform engagement efforts.

⁴ https://energysafety.ca.gov/wp-content/uploads/2021-sca-report-sce.pdf.

Addressing recommendation three, *embed learning organization concepts into the culture via training, incident investigations and corrective action systems,* SCE has:

- Launched human and organizational performance training to systematically embed learning organization concepts in SCE's safety culture.
- Developed a new tiered cause evaluation process which expanded the range of incidents being evaluated.
- Created targeted communication to share learnings for all serious injury cause evaluations including potential incidents.
- Expanded distribution of learnings from cause evaluations to include wider cross section of leaders across SCE.

Addressing recommendation four, *recognize and take action to mitigate the serious exposure posed by interactions with certain discontented members of the public,* SCE has:

- Increased outreach to educate employees on actions to proactively mitigate threats and assaults from members of the public.
- Maintained and distributed records regarding customers who have presented or may present a potential threat to employees. Provided employees proactive actions to mitigate recurrence.
- Supported aerial inspections at locations where access previously had been denied and/or hostile customers were located. Provided safety training presentations for drone vendors and shared lessons learned at Annual Safety Summit.
- Included safety guidelines and de-escalation tips in PSPS crew member training.

(3) <u>Recommendations of Safety and Operations Committee</u>

The Committee had one special meeting and one regular meeting during the first quarter of 2022 on January 26, 2022 and February 23, 2022, respectively. During these meetings, the Committee focused on wildfire and safety issues in the following categories: Wildfire Safety, Worker Safety, and Public Safety, among other topics.

Each of these areas is separately addressed below. In addition to quarterly meetings, the Committee Chair meets regularly with SCE management to discuss wildfire and worker safety issues.

Wildfire Safety

Discussions on wildfire safety during the first quarter 2022 meetings covered updates on the 2021 WMP, the Update, the PSPS Action Plan and additional mitigation activities and technology platforms.

At its January special meeting, the Committee received an overview of the Update and its emphasis on risk analysis and grid hardening, targeted circuit miles for covered conductor installation, vegetation management, and PSPS operations. The Committee also received reports on pre-filing briefings provided to key stakeholders, including government agencies and intervenors, and the post-filing external engagement outreach plan. The Committee received information on additional mitigations addressing secondary conductor ignitions and transmission wire down incidents and a report on the updated/refined grid hardening strategy in the Update. This report included the completed and planned scope of covered conductor deployment, segment-level risk and consequence analysis, and proposed potential mitigations such as continued covered conductor installation and targeted undergrounding. The Committee received an update on the estimated ignition risk reduction achieved to date with implemented WMP activities through year-end 2021, third-party validation of risk modeling, and ongoing advancement of risk modeling to project further risk reduction for the 2022 WMP activities. The Committee also received a report on the risk analysis to improve PSPS operations for frequently impacted circuits. The Committee and management discussed benchmarking against the other California investor-owned utilities (IOUs), components of overall risk reduction, and the rationale for covered conductor deployment beyond authorized levels in the SCE General Rate Case Final Decision based on the risk analysis informing SCE's updated/refined grid hardening strategy. The Committee and management discussed areas of advancement in the Update for high fire risk area (HFRA) inspections and additional risk-informed vegetation management activities. In addition, management reported to the Committee on the targeted underground feasibility analysis for longer-term grid hardening, noting factors for consideration, including PSPS thresholds, covered conductor deployment, egress constraints, terrain, and other factors. The Committee and management also discussed the maturity model, areas of focus for further growth, and differences in practices and reporting across the IOUs.

At its February meeting, the Committee received updates on year-end 2021 WMP targets and the wildfire risk reduction achieved with system hardening and other WMP activities. The Committee received a report on the completion of the majority of 2021 WMP activities and PSPS Action Plan milestones. Management also reported on the additional considerations for risk reduction, including other grid hardening tools like undergrounding and potentially factoring in climate change-driven impacts in the future. The Committee received an update on technology platforms being utilized for work management and data governance improvements, and technologies being evaluated for potential deployment as additional wildfire mitigations.

Worker Safety

Discussions on worker safety during the first quarter meetings covered a serious employee injury in January 2022 and a review of worker safety performance in 2021.

At its January special meeting, the Committee received a report out on an employee serious injury due to a flash event that occurred on January 1, 2022. The Committee and management discussed the contributing factors to the incident, and lessons learned.

At its February meeting, the Committee received an update on year-end 2021 worker safety performance including trends in serious injuries and fatalities (SIF) rates for employees and contractors, lessons learned from incidents, and focus areas for 2022. The Committee also received a report on recent safety incidents, cause evaluations and corrective actions for each incident. The Committee and management discussed safety and job training, job qualifications, and consequences of failures to follow safety rules. SCE's Senior Vice President for Transmission and Distribution reported to the Committee on her observations based on field visits and engagement with employees and leaders since joining the company, noting areas of focus for improvement, including accelerated completion of cause evaluations to create a learning organization, and more effective utilization of safety data. The Committee and management discussed the importance of training in safety performance outcomes.

Public Safety

The Committee received a report on public safety at its first quarter meeting in February, including year-end 2021 public safety performance. Management noted that SCE had no public SIFs in 2021 and described the focus areas for public safety in 2022, including improving data collection and collaborating with the Enterprise Risk Management organization regarding asset failure data modeling efforts. The Committee also received a report on asset performance trends in and out of HFRAs, including primary and secondary wire down incidents and underground equipment failure. The Committee recommended management continue to report on wire down and underground equipment failure trends and the impacts of mitigations.

Committee Recommendations

In addition to discussing the wildfire and safety topics during first quarter meetings, the Committee made the following recommendations and requests:

- 1. Recommended that management continue to report on safety performance and progress on safety observation and skill refresher training improvements.
- 2. Recommended that management continue to report on wire down and underground equipment failure trends and the impacts of mitigations.
- 3. Recommended that management continue to report on addressing guy wire anchor rod installation.
- 4. Recommended that management continue to report on wildfire mitigation plan activities and PSPS operations.

Completed Management Responses to Committee Recommendations

In response to the Committee's recommendations in prior meetings, management provided the following responses during the third quarter meetings, the details of which are described above or were pending from prior meetings:

1. <u>Recommendation (Fourth Quarter 2021)</u>: The Committee recommended that management report on the 2022 WMP Update submission.

Management response: The Committee received a report that covered the 2022 WMP submission at its January 2022 meeting.

2. <u>Recommendation (Fourth Quarter 2021)</u>: The Committee recommended that management continue to report on guy wire anchor rod installations.

Management Response: The Committee received a report on the guy wire anchor rod installations (as part of the Operational Mitigations Report) at its February 2022 meeting.

3. <u>Recommendation (Fourth Quarter 2021)</u>: The Committee recommended that management continue to report on safety performance regarding the recent trend in Days Away, Restricted or Transferred (DART) rates.

Management Response: The Committee received reports on safety performance and DART rates at both its December 2021⁵ and February 2022 meetings.

4. <u>Recommendation (Fourth Quarter 2021)</u>: The Committee recommended

⁵ This DART recommendation was inadvertently omitted from the 2021 Q4 Notification.

that management continue to report on contractor management improvement efforts.

Management Response: The Committee received a report on contractor management improvement efforts as part of the Operational Excellence Report at its December 2021⁶ meeting.

5. <u>Recommendation (Fourth Quarter 2021)</u>: The Committee recommended that management review PSPS customer notification effectiveness including after-event communications.

Management Response: The Committee received a report on the improvements in PSPS customer notifications as part of the report on the PSPS Action Plan in the Wildfire Safety Report at its February 2022 meeting.

Pending Management Responses to Committee Recommendations

The following recommendations were made by the Committee in past meetings and management plans to address them at future meetings.

- 1. <u>Recommendation (Fourth Quarter 2021)</u>: The Committee recommended management continue to review the effectiveness of safety metrics such as DART for future consideration.
- 2. <u>Recommendation (Fourth Quarter 2021)</u>: The Committee recommended management provide an update on implementation of the safety culture assessment recommendations.

The Committee has one regular second quarter 2022 meeting and one special second quarter 2022 meeting scheduled for April 27, 2022 and June 22, 2022 respectively, both of which will be summarized in the next quarterly report. Additional meetings will be scheduled as appropriate.

For questions, please contact June Bote at (714) 895-0585 or by electronic mail at june.bote@sce.com.

Southern California Edison Company

<u>/s/ Shinjini C. Menon</u> Shinjini C. Menon

SCM:sl:cm Enclosures

⁶ This contractor improvement recommendation was inadvertently omitted from the 2021 Q4 Notification.



ATTACHMENT A

SCE's 2020-2022 Wildfire Mitigation Plan (WMP) Progress Update – Q1 2022

(All data is as of March 31, 2022)¹

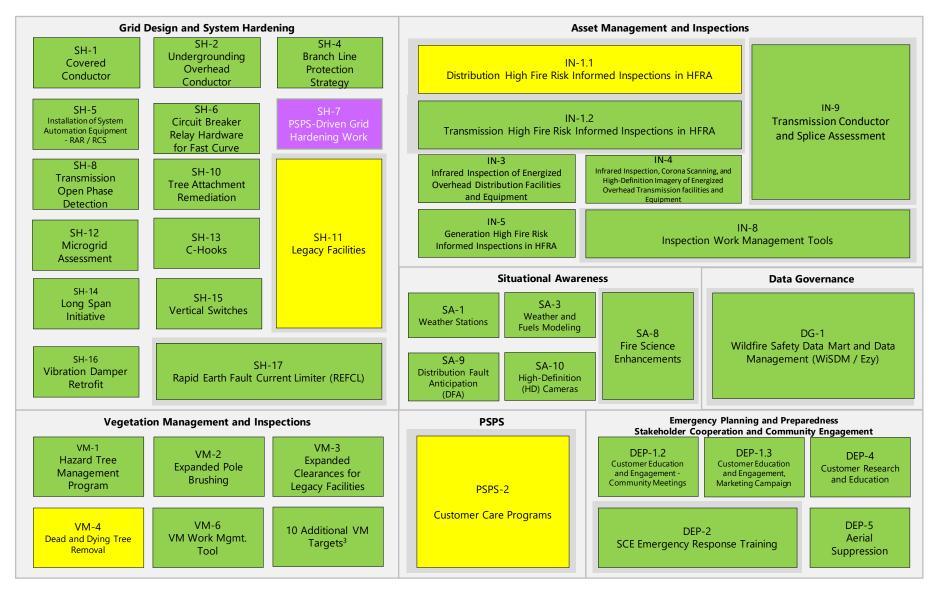
¹ Source: All data is as of March 31, 2022 (+/- 5 business days). Reported numbers are subject to revision upon data validation.



Energy for What's Ahead[™]

WMP Activities Summary²





² Source: All data is as of March 31, 2022 (+/- 5 business days). Reported numbers are subject to revision upon data validation.

³ These VM targets are in response to an OEIS requirement to create 2022 targets for additional VM initiatives that can be measured quantitatively. As a result, they are tracked as additional VM targets but are not considered formal WMP activities.

WMP Activities Summary⁴

Additional Vegetation Management Targets ⁵				
Detailed inspections and management practices for vegetation clearances around Distribution electrical lines, and equipment	Detailed inspections and management practices for vegetation clearances around Transmission electrical lines, and equipment	Emergency response vegetation management due to red flag warning or other urgent climate conditions	Recruiting and training of vegetation management personnel	Substation Inspections
Vegetation Inspections Audited Annually	Poles brushed per PRC 4292	Distribution LiDAR Vegetation Inspections	Transmission LiDAR Vegetation Inspections	Substation vegetation inspections

Inactive Under Review Complete

⁴ Source: All data is as of March 31, 2022 (+/- 5 business days). Reported numbers are subject to revision upon data validation.

⁵ These 10 VM targets are in response to an OEIS requirement to create 2022 targets for additional VM initiatives that can be measured quantitatively. As a result, they are tracked as additional VM targets but are not considered formal WMP activities. The targets were filed in the 2022 WMP Update on February 18, 2022.

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Behind Plan, Likely to Meet Year-end Target

On Track

Behind Plan, At-Risk of Not Meeting Year-end Target

3



Distribution Fault

Anticipation

(DFA)

On Track Be

Behind Plan, Likely to Meet Year-end Target

Behind Plan, At-Risk of Not Meeting Year-end Target

Situational Awareness Activities

Weather Stations

17%

Installed

Weather Stations (SA-1) Section 7.3.2 Page 265⁶

Program Target: Install 150 weather stations in SCE's HFRA. SCE will strive to install up to 175 weather stations in SCE's HFRA, subject to resource and execution constraints.

Status Update: Completed installation of 26 weather stations.

Distribution Fault Anticipation (DFA) (SA-9)

Section 7.3.2 Page 269

Program Target: SCE will evaluate the performance of installed fault anticipation technology and develop recommendations for future use by year-end 2022.

Status Update: Distribution Fault Anticipation (DFA) events reviewed internal to SCE in Q1 and 4 events reviewed externally with the vendor. 50% of the first draft report is complete.

Weather and Fuels Modeling

0%

Equipped

Weather and Fuels Modeling (SA-3)

Section 7.3.2 Page 283

Program Target: Equip 400 weather station locations with machine learning capabilities. SCE will strive to equip up to 500 weather station locations with machine learning capabilities, subject to resource and execution constraints.

Status Update: Point locations were provided to vendor to assess data quality and suitability to build new machine learning models. Vendor began training new machine learning models across SCE territory and performed new model verifications. Machine learning to be operationalized in Q3.

High Definition (HD) Cameras 0% Installed

High Definition (HD) Cameras (SA-10)

Section 7.3.2 Page 272 **Program Target:** Install 10 HD Cameras. SCE will strive to install up to 20 HD Cameras, subject to resource and execution restraints.

Status Update: Worked with local Fire Management Officers and Alert Wildfire PI to identify and validate installation locations. Installations to begin in Q2.

Fire Science (SA-8)

Section 7.3.2 Page 275

Fire Science

Program Target: Calibrate FPI 2.0 and evaluate its performance over the 2022 fire season. Improve fire spread modeling applications (i.e., FireSim and FireCast) to include 1) fire suppression and 2) buildings destroyed by fire.

Status Update: Calibration of FPI 2.0 by Fire Climate Zones using historical fire occurrence data continues. The calibration has been completed for the Fuels Index component. The Purchase Order (PO) to support the work was issued and signed in Q1. Coordination with vendor to draft a project plan to support development of the Building Loss Factor metric for evaluation has begun.



Behind Plan, Likely to Meet Year-end Target On Track

Behind Plan, At-Risk of Not Meeting Year-end Target

Grid Design and System Hardening

Covered Conductor

Covered Conductor (SH-1)

25% Installed

Section 7.3.3 Page 294 Program Target: Install 1,100 circuit miles of covered conductor in

SCE's HFRA. SCE will strive to install up to as many as 1,250 circuit miles of covered conductor in SCE's HFRA, subject to resource constraints and other execution risks.

Status Update: Completed installation of 278 circuit miles of covered conductor in HFRA

Remote Controlled Automatic Reclosers **Settings Update**

0%

Installed

Grid Hardening

Remote Controlled Automatic Reclosers Settings Update (SH-5)

Section 7.3.3 Page 311

Program Target: Install 15 sectionalizing devices such as RARs/RCSs driven by the results of evaluations / assessments conducted under SH-6 and SH-7. SCE will strive to install up to 31 sectionalizing devices such as RARs/RCSs driven by the results of evaluations / assessments conducted under SH-6 and SH-7, subject to resource constraints and other execution risks.

Status Update: Scope and design have been received, Installations to begin in Q2.

Undergrounding Overhead Conductor 0% Installed	 Undergrounding Overhead Conductor (SH-2) Section 7.3.3 Page 334 Program Target: Install 11 circuit miles of targeted undergrounding in SCE's HFRA.SCE will strive to install up to 13 miles of targeted undergrounding in SCE's HFRA, subject to resource constraints and other execution risks. Status Update: Currently 3 underground miles are in construction and will be completed in Q2. 9 underground miles have been authorized to proceed. 	Circuit Breaker Relay Hardware for Fast Curve 0% Installed
Branch Line Protection Strategy	Branch Line Protection Strategy (SH-4) Section 7.3.3. Page 308 Program Target: Install or replace fusing at 350 fuse locations that serve HFRA circuitry. SCE will strive to install or replace fusing at up	PSPS-Driven

19% Installed

FRA circuitry. SCE will strive to install or replace fusing at up to 483 locations that serve HFRA circuitry, subject to resource constraints and other execution risks.

Status Update: Completed installation of 69 fuses.

Circuit Breaker Relay Hardware for Fast Curve <u>(SH-6)</u>

Section 7.3.3 Page 292

Program Target: Replace/upgrade 104 relay units in SCE's HFRA.SCE will strive to replace/upgrade up to 125 relay units in SCE's HFRA, subject to resource constraints and other execution risks.

Status Update: Design completed in Q1 with installations to begin in Q2. Procurement delays have shifted some projects into later quarters in 2022 but still expect to meet year-end target.

PS-Driven

PSPS-Driven Grid Hardening Work (SH-7)

Section 7.3.3 Page 310

Program Target: Evaluate approximately 70 highly impacted circuits including 2021 PSPS events to determine additional deployment of **PSPS** mitigations.

Status Update: SCE met goal with 104 circuits evaluated against the 70 target.



On Track Bel

Behind Plan, Likely to Meet Year-end Target Meetin

Behind Plan, At-Risk of Not Meeting Year-end Target

Grid Design and System Hardening

Transmission Open Phase Detection 0% Installed	 Transmission Open Phase Detection (SH-8) Section 7.3.3 Page 337 Program Target: Deploy open phase logic on five transmission lines. SCE will strive to deploy open phase logic on up to 11 transmission lines, subject to resource constraints and other execution risks. Status Update:. Preliminary settings review completed. Currently developing finalized design packages and relay setting plans with field activities commencing in Q3. Deployment to occur in Q4. 	Microgrid Assessment	 Microgrid Assessment (SH-12) Section 7.3.3 Page 311 Program Target: SCE will actively attempt to obtain approval of easement with the landowner of the microgrid site, and if approval is received, SCE will move forward with microgrid project. If an approval is not received by June 30, 2022 or rejected, SCE will start to pursue other microgrid opportunities. Status Update: SCE continues to discuss with landowner approval of easement for microgrid site. The site location requires a vote and approval to grant easement. Vote was postponed from Q1 to Q2.
Tree Attachment Remediation 51% Remediations	Tree Attachment Remediation (SH-10) Section 7.3.3 Page 301 Program Target: Remediate 500 tree attachments in SCE's HFRA. SCE will strive to complete up to 700 tree attachment remediations in SCE's HFRA, subject to resource constraints and other execution risks. Status Update: Completed remediation of 257 tree attachments.	C-Hooks 0% Installed	C-Hooks (SH-13) Section 7.3.3 Page 331 Program Target: SCE will replace C-Hooks on 10 structures in SCE's HFRA and strive to replace up to 21 C-Hooks, subject to execution risks such as environmental clearance. Status Update: Statement of work for bid in progress; and expect to award by late Q2. Installations to begin in Q3.
Legacy Facilities	Legacy Facilities (SH-11) Section 7.3.3 Page 340 Program Target: Hydro Control Circuits: Based on 2021 assessments, perform grid hardening on three control circuits at three legacy facility sites Low Voltage Site Hardening: Based on 2021 assessment, perform one grid hardening project at a legacy facility site Grounding Studies/Lightning Arrestor Assessments and Remediations: Based on	Long Span Initiative 66% Remediations	Long Span Initiative (SH-14) Section 7.3.3 Page 321 Program Target: Remediate 1,400 spans in SCE's HFRA. SCE will strive to remediate up to 1,800 spans in SCE's HFRA, subject to resource constraints and other execution risks. Status Update: Completed 935 remediations.

Remediations

Status Update: Hydro Control Circuits: Currently behind plan due to COVID-related resource constraints. Expect to return to on track performance by end of Q2. Low Voltage Site Hardening: Currently behind plan to finalize the project plan and scope due to COVID-related resource constraints. Expect to return to on track performance by end of Q2. Grounding Studies/Lightning Arrestor Assessments and Remediations: Currently behind plan to finalize the project plan and scope due to project management resource constraints. Expect to return to on track performance in Q2.

2021 assessments perform four remediation projects at legacy facility

sites. Additionally, complete 13 assessments.



On Track Behind

Behind Plan, Likely to Meet Year-end Target Behind Pl

Behind Plan, At-Risk of Not Meeting Year-end Target

Grid Design and System Hardening

Vertical Switches

Vertical Switches (SH-15)

Section 7.3.3 Page 341 **Program Target:** Install 15 vertical switches in SCE's HFRA.SCE will strive to install 25 vertical switches in SCE's HFRA.

26% Installed

Status Update: Completed installation of 4 vertical switches.

Vibration Damper Retrofit **33%**

Installed

Vibration Damper Retrofit (SH-16)

Section 7.3.3 Page 303

Program Target: Retrofit vibration dampers on 100 structures where covered conductor is already installed in SCE's HFRA.SCE will strive to retrofit vibration dampers on up to 115 structures where covered conductor is already installed in SCE's HFRA.

Status Update: Construction began in Q1, completed 33 installations. There are some back-office activities continuing to monitor material availability.

Rapid Earth Fault Current Limiters (REFCL)

Rapid Earth Fault Current Limiters (REFCL) (SH-17)

Section 7.3.3 Page 323

Program Target: SCE will produce a report summarizing performance and lessons learned from previous REFCL installations. SCE will also initiate engineering and material purchase for the ground fault neutralizers (GFNs) to be constructed in 2023 at Acton and Phelan Substations.

Status Update: Ground fault neutralizer is in service, and performance continues to be monitored. Finalized specifications and material order to initiate engineering and material purchase for ground neutralizers, and engineering design contract awarded.

Inactive Under Review Complete

On Track Behind Plan, Likely to Meet Year-end Target Behind Plan, At-Risk of Not Meeting Year-end Target

Asset Management and Inspections

YTD Status]		
Ground	Distribution HFRI Ground / Aerial Inspections and Remediations (IN-1.1)	Transmission Infrared	Infrared Inspection, Corona Scanning and High- Definition (HD) Imagery of Transmission facilities
47%	Section 7.3.4 Page 362 Program Target: Inspect 150,000 structures in HFRA via ground	Inspections	and equipment (IN-4) Section 7.3.4 Page 354
Aerial	inspections. Subject to resource constraints and other factors, SCE will strive to inspect up to 180,000 structures in HFRA via both ground and aerial inspections. This target includes HFRI, compliance due structures	17% Targeted Circuits Inspected	Program Target: Inspect 1,000 transmission circuit miles on HFRA circuits.
30%	in HFRA and emergent risks identified during the fire season. Status Update: SCE completed 71,822 ground and 46,446 aerial structures in HFRA. Distribution ground inspections is slightly behind plan by 6% and experienced delays due to new vendor onboarding.	inspected	Status Update: SCE completed inspections of 176 transmission circuit miles in HFRA.
YTD Status	Transmission HFRI Ground / Aerial Inspections and Remediations (IN-1.2)	Generation Inspections	Generation Inspections and Remediations (IN-5) Section 7.3.4 Page 373 Program Target: Inspect 190 generation-related assets in HFRA.
Ground	Section 7.3.4 Page 375		
19%	Program Target: Inspect 16,000 structures in HFRA via both ground and aerial inspections. Subject to resource constraints and other factors, SCE will strive to inspect up to 19,000 structures in HFRA via both ground and aerial inspections. This target includes HFRI,	18% Inspected	Status Update: SCE completed 36 Generation inspections in HFRA.
Aerial	compliance due structures in HFRA and emergent risks identified during the fire season.		Inspection and Maintenance Tools (IN-8)
40%	Status Update: SCE completed 3,138 ground and 6,461 aerial structures in HFRA.		Section 7.3.4 Page 347 Program Target: Design capability for the legacy Distribution Ground inspection application in 2022 to transition to a single digital inspection platform in a future year. In support of remediation efforts, conduct assessment to identify enhancements for Field Crew
Distribution Infrared Inspections 93% Targeted Circuits Inspected	Infrared Inspection of energized overhead distribution facilities and equipment (IN-3) Section 7.3.4 Page 352 Program Target: Inspect 4,408 distribution overhead circuit miles in HFRA. Status Update: SCE inspected 4,114 circuit miles in HFRA.	Inspection and Maintenance Tools	 efforts, conduct assessment to identify enhancements for Field Crew application, and evaluate applicability of enhancements by yearend 2022. Status Update: InspectForce Transmission Ground, carryover from 2021 WMP, was implemented in February and released in Q1, which included new survey questions and updates to notification validation logic and google maps. Completed production upgrade of the field crew iPad application with capabilities; and planning deployment of distribution activities for Q2 and Q3.

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On Track Behind

Behind Plan, Likely to Behi Meet Year-end Target Mee

Behind Plan, At-Risk of Not Meeting Year-end Target

Asset Management and Inspections

Transmission Conductor & Splice Assessment

Transmission Conductor & Splice Assessment (IN-9)

Section 7.3.3 Page 356 **Program Target:** Will inspect 75 spans⁷ with LineVue, inspect 50 splices⁸ with X-Ray and obtain 5 Conductor Samples⁹; SCE will strive to inspect up to 150 spans with LineVue, inspect up to 70 splices with X-Ray, and obtain up to 15 Conductor Samples, subject to execution constraints.

Status Update: Inspected 0 LineVue spans: inspected 19 splices with X-Ray, and inspected 0 Conductor Samples. Inspections for LineVue spans and Conductor samples planned to begin in Q2.

⁷ Span defined as 1 phase from one structure to another.

⁸ Splice defined as individual splice.

⁹ Conductor sample defined as 15 ft segment of conductor.



On Track

Behind Plan, Likely to Meet Year-end Target

Behind Plan, At-Risk of Not Meeting Year-end Target

Vegetation Management and Inspections

HTMP

36%

Circuits Assessed

Hazard Tree Management Program (VM-1)

Section 7.3.5 Page 425 Program Target: Inspect 330 circuits and assess any trees with strike potential along those circuits.

Status Update: Completed inspection of 119 circuits for HTMP.

Dead and Dying Tree Removal
36% Circuits Inspected

Dead and Dying Tree Removal (VM-4)⁹

Section 7.3.5 Page 427 **Program Target:** Inspect 900 unique circuits and prescribe mitigation for dead and dying trees with strike potential along those circuits.

Status Update: Completed inspections of 325 circuits. Currently behind plan by 3% against the original plan of 334 circuits due to weather conditions and some circuits having longer average mileage. Expect to return to on track performance in Q2.

Expanded Pole

Expanded Pole Brushing (VM-2)

Brushing

39% Poles Cleared

Section 7.3.5 Page 404

Program Target SCE will inspect and clear (where clearance is needed) 78,700 poles in HFRA, with the exception of poles for which there are customer access or environmental constraints. SCE will strive to inspect and clear (where clearance is needed) up to 170,000 distribution poles in HFRA. These poles are in addition to poles subject to PRC 4292.

Status Update: Inspected and cleared (where clearance needed and access possible) 31,198 poles.

VM Work Management **Tool (Arbora)**

VM Work Management Tool (Arbora) (VM-6)

Section 7.3.5 Page 430

Program Target SCE will implement the following programs within the VM Work Management Tool, Arbora: (1) Hazardous Tree Program (HTP) (including: Dead & Dying Tree Removal and Hazard Tree Mitigation) and (2) Routine Line Clearing.

Status Update: HTP pilot launch in Q1 was successful. HTP full roll out is on track and expected to completed throughout Q2.

Expanded **Clearances for Legacy Facilities**

6%

Performed

Expanded Clearances for Legacy Facilities (VM-3)

Section 7.3.5 Page 407 Program Target: Perform expanded clearances at 32 legacy facility locations.

Status Update: Completed expanded clearance at 2 sites. The majority of expanded clearances are scheduled in the summertime to **Expanded Clearances** capture new growth and avoid snow and weather issues.



Vegetation

Recruiting and

Training

On Track Behind Plan, Likely to Meet Year-end Target

Behind Plan, At-Risk of Not Meeting Year-end Target

Additional Vegetation Management Targets

Detailed	
Inspections:	
Distribution	

39%

Inspections

Detailed inspections and management practices for vegetation clearances around Distribution electrical lines, and equipment: Section 7.3.5 Page 396

Program Target: Inspect ~600,000 trees adjacent to Dist. lines, based on current unique tree inventory count

Status Update: Completed inspection of 238,022 trees adjacent to Dist. lines, based on current unique tree inventory count.

<u>Recruiting and training of vegetation management</u> <u>personnel:</u>

Section 7.3.5 Page 420 **Program Target:** Maintain current staffing levels of 95 ISA certified arborists performing work within SCE service territory.

Status Update: Current staffing level at 148 ISA certified arborists performing work within SCE service territory.

Detailed Inspections: Transmission

17%

Inspections

Detailed inspections and management practices for vegetation clearances around Transmission electrical lines, and equipment: Section 7.3.5 Page 396

Program Target Inspect ~100,000 trees adjacent to Trans. lines, based on current unique tree inventory count.

Status Update: Completed inspection of 17,523 trees adjacent to Dist. lines, based on current unique tree inventory count.

Substation Inspections 34%

Inspections

Substation Inspections:

Section 7.3.5 Page 428 **Program Target** Inspect 169 substations, 5 times per year for (146) GO174 substations and (23) ISO & FERC substations, totaling 845 inspections.

Status Update: Completed 294 inspections.

Vegetation Emergency Response

57%

Inspections

Emergency response vegetation management due to red flag warning or other urgent climate conditions: Section 7.3.5 Page 400

Program Target: Inspect and clear (where clearance needed and access possible) ~26,400 poles in identified Areas of Concern (AOC).

Status Update: Inspected and cleared (where clearance needed and access possible) 15,290 poles.

Vegetation Inspections Audited Annually
6%
Of total tree inventory

Vegetation Inspections Audited Annually:

Section 7.3.5 Page 416 **Program Target:** Perform risk-based circuit mile Quality Control (QC) inspections on approximately 15% of SCE total tree inventory.

Status Update: Completed 111,729 QC inspections.



Behind Plan, Likely to Meet Year-end Target On Track

Behind Plan, At-Risk of Not Meeting Year-end Target

Additional Vegetation Management Targets

Poles brushed per PRC 4292:

Poles Brushed Per 4292:

Section 7.3.5 Page 407 Program Target: Inspect and clear 55,100 poles (where clearance

40% Inspections needed and access possible) in state responsibility area with equipment identified by PRC 4292.

Status Update: Inspected and cleared (where clearance needed and access possible) 22,281 poles.

Substation Vegetation Management
15%
Inspections

Substation Vegetation Management:

Section 7.3.5 Page 429 Program Target: Perform Vegetation Management substation inspections in Tier 2 & Tier 3, totaling 169 substations.

Status Update: Completed 26 substation inspections.

Distribution LiDAR Vegetation Inspections

Remote Sensing Inspections of Vegetation and Around Transmission Electric Lines and Equipment: Section 7.3.5 Page 410

0% Inspections Program Target Inspect at least 500 HFRA circuit miles. Status Update: Completed inspection of 0 HFRA circuit miles.

Inspections are on plan to begin in Q2 and be completed in Q3.

Transmission	Remote Sensing Inspections of Vegetation and
LiDAR	Around Transmission Electric Lines and Equipment:
Vegetation	Section 7.3.5 Page 412
Inspections	Program Target: Inspect at least 1600 HFRA circuit miles.
46% Inspections	Status Update: Completed inspection of 747 HFRA circuit miles.

Inactive	Under Review

Complete On Track

Behind Plan, Likely to Meet Year-end Target Behind Plan, At-Risk of Not Meeting Year-end Target

Emergency Planning and Preparedness Stakeholder Cooperation and Community Engagement

Community Meetings	Customer Education and Engagement – Community Meetings (DEP-1.2) Section 7.3.10 Page 491 Program Target: SCE will host at least nine wildfire community safety meetings in targeted communities based on the impact of 2021 PSPS events and ongoing wildfire mitigation activities. Status Update: No meetings have been hosted in Q1. 9 meetings currently scheduled in Q2.	Customer Research and Education	 Customer Research and Education (DEP-4) Section 7.3.10 Page 507 Program Target: SCE plans to conduct at least six PSPS-related surveys in 2022, including the PSPS Tracker survey, wildfire safety community meeting feedback survey, CRC/CCV feedback survey, In-Language Wildfire Mitigation Communications Effectiveness Surveys, PSPS Working Group and Advisory Board Surveys, and the Voice of Customer surveys. Status Update: PSPS tracker questionnaire was finalized, and data collection has begun. Residential and Non-Residential customers will be contacted via phone and web-based surveys.
Marketing Campaign	Customer Education and Engagement – Marketing Campaign (DEP-1.3) Section 7.3.10 Page 502 Program Target: PSPS Awareness target: 50%. Status Update: PSPS awareness at 55%.	Aerial Suppression	Aerial Suppression (DEP-5) Section 7.3.10 Page 512 Program Target: Will enter into a Memorandum of Understanding (MOU) with local county fire departments to provide standby cost funding for up to five aerial suppression resources strategically placed around the SCE service area. Status Update: Draft MOUs were sent to Los Angeles County Fire Department, Orange County Fire Association and Ventura County Fire Department; and all three counties provided MOU draft comments in late Q1.
SCE Emergency Responder Training	SCE Emergency Responder Training (DEP-2) Section 7.3.9 Page 477 Program Target: IMT (Incident Management Team): Have all PSPS IMT and Task Force me UAS (Unmanned Aircraft System): SCE plans to expand the program by te Status Update: IMT: Training and IMT Exercise kicked-off in Q1. Training to begin in Q2. UAS: 21 UAS Operators became technically qualified.	echnically qualifying 50	



On Track Beh

Behind Plan, Likely to Beh Meet Year-end Target Me

Behind Plan, At-Risk of Not Meeting Year-end Target

Data Governance

Wildfire Safety Data Mart and Data Management (WiSDM / Ezy) (DG-1)

Section 7.3.7 Page 462 Program Target:

Ezy Data:

- Expand cloud Artificial Intelligence (AI) platform
- Enable LIDAR data storage capability

WiSDM:

- Complete wildfire data repository design
- Consolidate wildfire data storage onto wildfire data repository platform

Status Update:

- Ezy Data deployed the Digital Accelerator (DA) image quality model integration on cloud platform and working to refine model capabilities and finalizing LiDAR business capability definition.
- WiSDM: Process revalidation and data mapping continues. Common data repository design in progress to baseline system requirements for OEIS data reporting in Q2.

Wildfire Safety Data Mart and Data Management





ack Behind Plan, Likely to Meet Year-end Target

Behind Plan, At-Risk of Not Meeting Year-end Target

PSPS

Customer Care Programs (PSPS-2)

Section 7.3.6 Page 448

Program Target:

- Customer Care Programs
 - 2a: Customer Resiliency Equipment: Critical Care Backup Battery (CCBB): Enroll 2,750 customers in the CCBB program (35% of forecasted eligible population). Continue to identify new eligible customers each month to offer program.
 - 2b: Portable Power Station Rebates and Portable Generator Rebates: SCE to issue 3,000 rebates and will strive to issue 4,000 rebates.

Status Update: The team is working to redesign and implement an updated marketing strategy and expect to increase pace as fire season progresses.

- 2a: Enrolled 478 customers.
- 2b: Issued 380 rebates.

Off-Track Narrative – IN-1.1A Dist. Ground Inspections

Activity Target

Inspect 150,000 structures in HFRA via ground inspections. Subject to resource constraints and other factors, SCE will strive to inspect up to 180,000 structures in HFRA via both ground and aerial inspections. This target includes HFRI, compliance due structures in HFRA and emergent risks identified during the fire season.

YTD Status	Behind Plan
YE Outlook	On Track

Key Takeaways

- Currently behind plan by 6% (71,822 YTD) against the original plan (79K).
- It is expected that pace will increase for the new vendor and inspections will conclude on plan.

Risks or Challenges

• Delays in issuing equipment (iPads) and training newly-onboarded vendor.

Actions to Improve Performance / Get Well Plan

- Vendor has been onboarded and issued equipment, which has aided in returning to planned throughput. Vendor is also learning SCE processes.
- To narrow the gap between planned and actual work completed, the vendor created a get-well-plan involving onboarding a subcontractor to increase overall throughput.

Off-Track Narratives – <u>SH-11A, SH-11B, SH-11C Legacy Facilities</u>

Activity Target

SH-11A Legacy Facilities: Grounding Studies

Based on 2021 assessments perform four remediation projects at legacy facility sites. Additionally, complete 13 assessments.

SH-11B Legacy Facilities: Low Voltage Site

Based on 2021 assessment, perform one grid hardening project at a legacy facility site.

SH-11C Legacy Facilities: Hydro Control Circuits

Based on 2021 assessments, perform grid hardening on three control circuits at three legacy facility sites.

Risks or Challenges

- SH-11A Legacy Facilities: Grounding Studies Project teams were impacted by COVID-19, which resulted in delays performing soil resistivity testing and collection of vital information.
- SH-11B Legacy Facilities: Low Voltage Site Reliant on the availability of local Transmission & Distribution for design and construction.
- SH-11C Legacy Facilities: Hydro Control Circuits: All work is reliant on availability of Transmission & Distribution resources.

YTD Status Behind Plan YE Outlook On Track

Key Takeaways

- SH-11A Legacy Facilities: Grounding Studies Currently behind plan, completed 0 planned assessments (total 0 YTD) against the original plan (2). Although the March milestone was not achieved, 5 studies are now in various stages. Expect to be back on track and be able to meet the June milestone.
- SH-11B Legacy Facilities: Low Voltage Site Currently behind plan with no project scope/plan finalized against the original plan to complete in March. Generation had competing priority with a Long-Term Capital project which caused the finalization of scope and project plan to be delayed in March. Expect to return to on track performance ahead of the next milestone in June.
- SH-11C Legacy Facilities: Hydro Control Circuits Currently behind plan with no project scope/plan finalized against the original plan to complete in March. The delay is minimal by only by a couple weeks and the design is scheduled to be completed. Expect to return to on track performance by end of April.

Actions to Improve Performance / Get Well Plan

- SH-11A Legacy Facilities: Grounding Studies Expected to be back on track by the June milestone. The following actions have already been taken: 1) Staff availability to increase as recuperated staff return to work, 2) Several sites that could be completed without some of the soil testing were moved forward, in order to support the overall schedule.
- SH-11B Legacy Facilities: Low Voltage Site Project plan has been developed and capital project work has levelized. Working with local Distribution to identify the specific scope of line that should be switched to covered conductor and have it designed and approved.
- SH-11C Legacy Facilities: Hydro Control Circuits Once the design is approved, the team will focus on obtaining the environmental clearances so it can be released to begin construction.

Off-Track Narrative – <u>PSPS-2 Customer Care Programs</u>

Activity Target

PSPS-2a Critical Care Backup Battery

Enroll 2,750 customers in the CCBB program (35% of forecasted eligible population). Continue to identify new eligible customers each month to offer program.

PSPS-2b Portable Power Station Rebates and Portable Generator Rebates

SCE to issue 3,000 rebates and will strive to issue 4,000 rebates.

Risks or Challenges

PSPS-2a Critically Care Battery Backup

• The eligible customer base fluctuations may differ from the historical customer count, which could result in the annual forecasted values differing from the actual customer base.

PSPS-2b Portable Power Station Rebates and Portable Generator Rebates

• Only residents in HFRA are eligible for the rebate, which limits the number of qualified residents.

YTD Status	Behind Plan
YE Outlook	On Track

Key Takeaways

PSPS-2a Critically Care Battery Backup

- Currently behind plan (478 YTD) against the original plan (~650).
- The actual monthly eligible customer base fluctuates if customers drop/join the eligibility pool.
- The team is working to develop an estimated return to on track performance.

PSPS-2b Portable Power Station Rebates and Portable Generator Rebates

- Currently behind plan (380 YTD) against the original plan (~480).
- Marketing delayed in January due to contract negotiations and subsequent later signing.
- 0 PSPS events YTD, compared to 1 large event in January 2021; 2022 forecast was based on 2021 historical rebates.
- Expect to return to on track performance by late April to early May.

Actions to Improve Performance / Get Well Plan

PSPS-2a Critically Care Battery Backup

- Updates will be made to marketing material based on key customer survey feedback.
- Adjusting mailers so they can go out earlier in the month and contractors may contact customers earlier.
- May consider removing low-income requirement if not on track by mid-year.

PSPS-2b Portable Power Station Rebates and Portable Generator Rebates

- Pamphlet insert coming with the April bill to increase program awareness; social media ad retargeting will also begin in May and will run through November.
- 10 virtual community outreach and engagement sessions scheduled between May and June.

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Off-Track Narrative – VM-4 Dead & Dying Tree Removal

Activity Target

Inspect 900 circuits and assess any trees with strike potential along those circuits.



YTD Status	Behind Plan
YE Outlook	On Track

Key Takeaways

- Currently behind plan 3% (325 YTD) against the original plan (~335).
- 55 circuits in progress and expect to return to on track performance in April.

Risks or Challenges

• Weather and Environmental Holds were constraints in Q1 and are expected to release in early Q2.

Actions to Improve Performance / Get Well Plan

- Monitoring and tracking assessor vendors and performing biweekly status meetings.
- Assessors are working in other areas until snow melts and snowy areas are safe to return to and continue work.