

Shinjini C. Menon Managing Director, State Regulatory Operations

November 1, 2021

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 2021 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 third quarter of 2021, and a summary of the implementation of Committee recommendations from previous meetings.³

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 Although 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 2021 WMP Update, which was approved on August 19, 2021. Advice 4437-E (submitted March 8, 2021) and SCE's 2020 Annual Report on Compliance (ARC, submitted March 31, 2021) provide details on implementation of SCE's approved 2020-2022 WMP.

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."

³ SCE Advice 4337-E.

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.⁴

SCE provides the required information below:

(1) Implementation of Wildfire Mitigation Plan

On February 5, 2021, SCE submitted its 2021 WMP Update,⁵ a comprehensive WMP covering 2021-2022 and building on its 2020 WMP. The Update included discussion of 2021 programs and activities, including successes and lessons learned. On June 3, 2021, SCE submitted its 2021 WMP Update Revision, which included responses to four Critical Issues identified by the Wildfire Safety Division (WSD). On July 1, 2021, the WSD transitioned from the California Public Utilities Commission (Commission or CPUC) to the California Natural Resources Agency and became the Office of Energy Infrastructure Safety (OEIS or Energy Safety). On July 16, 2021, the CPUC contemporaneously issued a draft Resolution WSD-020 and comment letter ratifying Energy Safety's draft Action Statement approving SCE's 2021 WMP Update. On August 19, 2021, the Commission ratified SCE's 2021 WMP Update.⁶

In 2021, SCE is tracking 39 specific wildfire-related programs and activities that constitute its 2021 WMP Update, including additional grid hardening, enhanced inspection and repair programs, continuation of aggressive vegetation

⁴ Pul. Util. Code § 8389(e)(7).

⁵ SCE submitted a Supplement to the Update on February 26, 2021.

⁶ WMP approval statement available at: https://energysafety.ca.gov/wp-content/uploads/final-resolution-wsd-020.pdf.

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 – Q3 2021), SCE presents detailed information about the implementation status of each of these wildfire-related mitigation activities and programs. As referenced in Attachment A, SCE is substantially on track to meet the major activities including grid hardening, inspection and maintenance, vegetation management and PSPS action plan as set forth in the 2021 WMP Update but notes that 15 of the activities are behind plan for Q3; however, 9 of those activities are still on track for meeting year-end targets. The remaining 6 activities are at risk due to circumstances such as delays in vendor deliverables, technological progress and access to qualified crews. Attachment A provides more details on Behind Plan activities including actions to improve performance/get well plans for pending activities during the remainder of the year.

(2) Implementation of Most Recent Safety Culture Assessment

Safety is the first of SCE's core values and this is demonstrated through the company's commitment to creating and maintaining a safe environment for employees, contractors, and the public. SCE continues to improve its safety culture through leader safety ownership, safety culture training, engagement and message reinforcement, and the incorporation of feedback from all levels of the organization.

Energy Safety initiated its 2021 Safety Culture Assessment (SCA) process for electrical corporations and conducted its first assessment for SCE on June 14th. 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 SCE.⁷ On September 9, 2021, via e-filing with Energy Safety, SCE formally agreed to implement the findings and recommendations in the SCA report.

(3) Recommendations of Safety and Operations Committee

The Committee had one regular meeting during the third quarter of 2021 (on August 25, 2021). During this meeting, 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.

⁷ https://energysafety.ca.gov/wp-content/uploads/2021-sca-report-sce.pdf.

Wildfire Safety

Discussions on wildfire safety during the third quarter meeting covered wildfire safety mitigation and readiness efforts and progress made under the WMP and the PSPS Action Plan.

The Committee received a report on wildfire safety mitigation and readiness efforts. Management described the local fire conditions and readiness efforts in anticipation of peak fire season. The report also covered the estimation of wildfire risk reduction achieved by implementation of mitigations to date, and refinement of risk analysis on the effectiveness of covered conductor.

The Committee also received a report on progress to date on the WMP and PSPS action plan and areas where activities are behind schedule with respect to achieving year-end targets and contributing factors. The Committee discussed various issues with management, including PSPS lessons learned from Pacific Gas & Electric Corporation's experience in the Dixie Fire, availability of resources to fully implement the WMP and expanded covered conductor deployment, and effectively communicating risk reduction to stakeholders.

Worker Safety

Discussions on worker safety during the third quarter meeting covered contractor management and safety and worker safety performance trends.

The Committee received an update on worker safety performance, including improvement in the Serious Injuries and Fatalities (SIF) rate and an increase in the Days Away, Restricted or Transferred (DART) rate. The Committee also received an update on contractor safety performance data, highlighting a contractor's recent safety incident which resulted in serious injuries, and implications for that contractor including corrective actions such as a stand down of work, steps required for any return to work, and significant reduction in scope of work. The Committee and management also discussed heat-related injuries, the impact of heat on all types of injuries, and mitigations to manage heat exposure.

In response to a Committee request, management reported to the Committee on safety performance data for the Transmission organization. Management noted key takeaways, including the locations requiring a further focus on safety performance, leadership and performance management in those locations. The Committee and management discussed safety observations as a leading indicator and increased leadership engagement and accountability on the issue of safety observations.

Public Safety

The Committee received reports on public safety at its third quarter meeting, including on issues with guy wire anchor rod installation performed by certain contractors and measures taken to improve contractor management processes.

The Committee received an update on the guy wire anchor rod installation issue, as recommended by the Committee. The update covered various issues, including the status of the operational mitigations, the discovery of further improper installations beyond the anchor extensions and Power Installed Screw Anchors. The Committee and management also discussed the status of the mitigations and the ongoing work to identify and remediate the additional findings. Management also described the process and quality controls in place for these inspections and remediations, noting that one of the subcontractors implicated across a number of prime contractors is no longer allowed to work for SCE or for prime contractors.

The Committee also received a report on the progress on improving contractor management, including working with an external consultant to critically review SCE's contractor management approach, and validate the scope of improvements required. Management noted the area of focus for contractor management improvement starting with vegetation management. The Committee and management discussed various elements of the process improvement, including regarding the evaluation of centralized vendor management.

Committee Recommendations

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

- 1. Recommended that management continue to report on refinements to the wildfire risk reduction assessments.
- 2. Recommended that management report on the November WMP Progress Report submittal.
- 3. Recommended that management report on the results and recommendations of the OEIS safety culture assessment.
- 4. Recommended that management continue to report on addressing guy wire anchor rod installations.
- 5. Recommended that management continue to report on contractor management improvement efforts.

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:

1. <u>Recommendation (Second Quarter 2020)</u>: The Committee recommended that management report back on status of efforts to address guy wire anchor rod installations.

<u>Management Response</u>: The Committee received a report regarding the guy wire anchor rod installation issues that addressed this recommendation at the August 2021 meeting.

2. <u>Recommendation (Second Quarter 2021)</u>: The Committee recommended that management continue to report on the status of vegetation management safety performance and impacts on WMP program targets.

<u>Management Response</u>: The Committee received a report on the impact of vegetation management on the WMP and an update on vegetation management at the August 2021 meeting.

3. <u>Recommendation (Second Quarter 2021</u>): The Committee requested that data be provided on Transmission safety performance by region (similar to the data provided for Distribution safety performance).

<u>Management Response:</u> The Committee received a report containing Transmission safety data at the August 2021 meeting.

4. <u>Recommendation (Second Quarter 2021)</u>: The Committee recommended that management report on the results of the RFP for external expertise on contractor management, controls, and best practices.

<u>Management Response:</u> The Committee received a report that described the engagement of the external consultant to work on contractor management issues that addressed this recommendation at the August 2021 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 2020)</u>: The Committee recommended that management report back to the Committee on their risk evaluation and prioritization methodology in light of the significant increase in ignitions from secondary conductors.
- 2. Recommendation (Second Quarter 2021): The Committee

recommended that the evaluation of the Audit Plan related to safety audits for transmission work be ongoing.

The Committee has two regular fourth quarter meetings scheduled for October 27, 2021 and December 8, 2021, 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

ATTACHMENT A

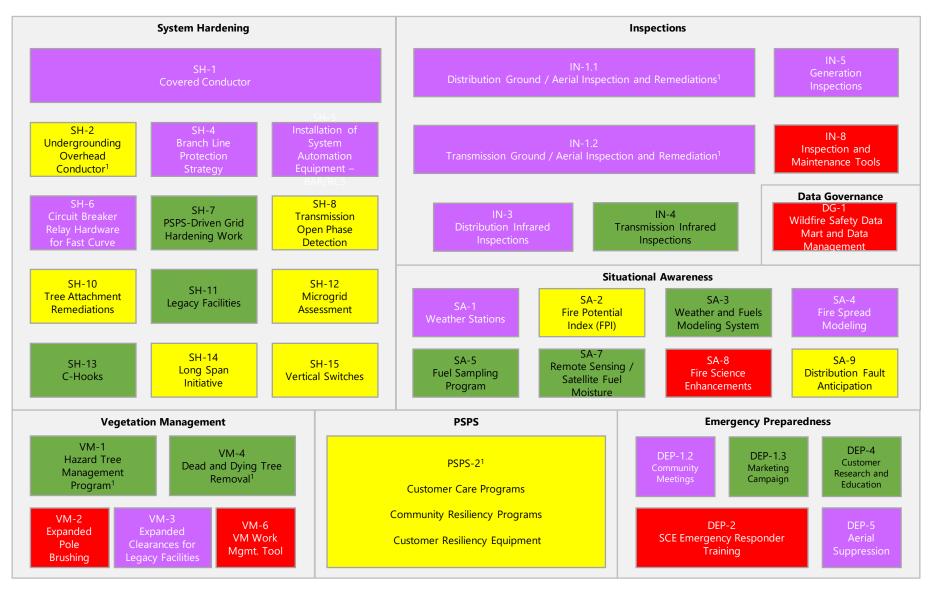
SCE's 2020-2022 Wildfire Mitigation Plan (WMP) Progress Update – Q3 2021

(All data is as of September 30, 2021)



Energy for What's Ahead[™]





Source: All data is as of September 30, 2021 (+/- 5 business days)

*Reported numbers are subject to revision upon data validation. Plans may vary pending SCE's reevaluation after General Rate Case decision.

¹Activity included in 2021 Change Orders Report filed on November 1, 2021

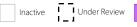


On Track Behind Plan, Likely to Meet Year-end Goal

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

Situational Awareness Activities

Weather Stations	 Weather Stations (SA-1) Section 7.3.2.1 Page 196* Program Target: SCE expects to install 375 weather stations but will attempt to install as many as 475. Status Update: Installed ~375 weather stations through Q3, meeting the goal of 375. 	Fire Spread Modeling	Fire Spread Modeling (SA-4) Section 7.3.2.6.2 Page 205 Program Target: Develop a methodology and a strategy to test FireCast/FireSim implementation into PSPS decision making based on backcast information by Q3. Status Update: Completed development of methodology for incorporating risk and consequence data.
Fire Potential Index (FPI)	 FPI (SA-2) Section 7.3.2.4.1 Page 201 Program Target: 1) Backcast 20 years of FPI using FPI 2.0 before typical height of fire season (Q3) to determine historical performance compared to current FPI 2) Run FPI 2.0 in parallel with the current FPI and compare outputs for the 2021 fire season Status Update: SCE is improving the accuracy of its FPI (referred to as FPI 2.0) through the integration of historical weather and vegetation data for more precise PSPS decision-making. Team experienced a delay in finalizing the circuit-level FPI 2.0 output, which resulted in delayed documentation of the FPI 2.0 methodology. Documentation of this methodology is now expected to be completed by early Q4. 	Fuel Sampling Program	 Fuel Sampling Program (SA-5) Section 7.3.2.4.2 Page 202 Program Target: Maintain periodic fuel sampling across SCE's HFRA and evaluate the need to sample additional locations Status Update: Vendor continues to supply reports every 2 weeks per project plan. Plan to review and assess the fuel sampling output in Q4.
Weather and Fuels Monitoring System	 Weather and Fuels Monitoring System (SA-3) Section 7.3.2.6.1 Page 207 Program Target: Install two additional High-Performance Computing Clusters (HPCCs) to facilitate the installation and Operationalization of the Next Generation Weather Modeling System, allowing for more precise, higher resolution output Status Update: HPCCs were built in Q2. In Q3, SCE performed additional testing through the year before operationalizing the HPCCs and plan to begin producing higher resolution output from both HPCCs in Q4. 	Remote Sensing / Satellite Fuel Moisture	Remote Sensing / Satellite Fuel Moisture (SA-7) Section 2.3.2.4.3 Page 204 Program Target: Initiate wind profiler pilot project to validate weather model performance for potential improvements to weather models Status Update: Plan to collect wind profiler data in Q4 to analyze output. Completed onboarding with vendor to begin-Satellite Fuel Moisture work in Q4 to potentially improve weather models.



Complete

On Track

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

Situational Awareness Activities

Fire Science Prog

Enhancements

Fire Science Enhancements (SA-8)

Section 7.3.2.4.4 Page 205 **Program Target:** Evaluate current wildfire events in context of 40year history of wildfires

Status Update: While the historical climatological data output is likely to be produced and reviewed in 2021, the development of climatological products will not be completed this year as vendor work was reprioritized to support initiatives that will inform PSPS decision making in 2021. While this activity is at risk for not meeting its year end target, it is not intended to directly mitigate wildfire risk in 2021.

Distribution
Fault
Anticipation
(DFA)

Distribution Fault Anticipation (DFA) (SA-9)

Section 7.3.2.2 Page 198 **Program Target:** Complete installation of 120 DFA units on circuits in SCE's HFRA and continue evaluation of DFA technology which may result in SCE installing up to 150 units

Status Update: 87 DFA devices have been installed ahead of planned dates but are not yet in-service because of material delays for initial network antenna installations. Plan to complete goal in Q4.



On Track

Behind Plan, Likely to Meet Year-end Goal

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

System Hardening

Covered Conductor* 101% installed	Covered Conductor (SH-1) Section 7.3.3.3.1 Page 214 Program Target: SCE expects to install 1,000 circuit miles of covered conductor in SCE's HFRA but will attempt to install as many as 1,400 circuit miles of covered conductor in SCE's HFRA, subject to resources constraints and other execution risks. SCE continues to reevaluate its covered conductor strategy and scope along with alternative strategies as appropriate to protect public safety. Status Update: Activity met goal in Q3 with ~1,000 circuit miles installed.	Install RAR/RCS	Installation of System Automation Equipment – RAR/RCS (SH-5) Section 7.3.3.9 Page 223 Program Target: N/A – If RARs/RCSs are determined to be necessary based on the SH-7 analysis, SCE will develop appropriate project plans Status Update: : Activity met goal in Q3 in accordance with Corrective Action Plan. Total of 17 automatic devices and 8 isolation devices installed.
Undergrounding Overhead Conductor*	Undergrounding Overhead Conductor (SH-2) ¹ Section 7.3.3.16.1 Page 228 Program Target: Install 4 miles of undergrounded HFRA circuits SCE will attempt to install 6 miles of undergrounded HFRA circuits, subject to resource constraints and other execution risks, such as permitting, environmental or coordinating with other utilities. Status Update: Construction began in Q2. At least 4 miles are on-track for year-end completion	Circuit Breaker Relay Hardware for Fast Curve*	Circuit Breaker Relay Hardware for Fast Curve (SH-6) Section 7.3.3.2 Page 213 Program Target: Replace/upgrade 60 relay units in HFRA. SCE will strive to replace/upgrade 86 relay units in HFRA, subject to Resource constraints and other execution risks Status Update: Activity met goal in Q3 with 64 devices installed.
Branch Line Protection Strategy	Branch Line Protection Strategy (SH-4) Section 7.3.3.7.1 Page 219 Program Target: Install or replace fusing at 330 fuse installation Locations SCE will strive to install or replace fusing at 421 locations, subject to resource constraints and other execution risks	PSPS-Driven Grid Hardening	PSPS-Driven Grid Hardening Work (SH-7) Section 7.3.3.8.1 Page 221 Program Target: SCE will develop a methodology to project probability of PSPS de-energization and impact. Utilizing this methodology, SCE will adopt a more targeted approach by evaluating

Status Update: Activity met goal in Q3 with ~340 fuses installed

methodology, SCE will adopt a more targeted approach by evaluating highly impacted circuits from the remaining 50% circuits in HFRA.

Status Update: Review of the second 50% of riskiest circuits is under development and expected to complete in Q4.

U

Strategy





Behind Plan, Likely to Behind Pl Meet Year-end Goal Meeting

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

System Hardening

Transmission Open Phase Detection 60% installed	Transmission Open Phase Detection (SH-8) Section 7.3.3.17.1 Page 230 Program Target: Install transmission open phase detection devices on 10 transmission circuits. Status Update: Installation has been completed on 6 circuits. Remaining circuits to be installed in Q4	C-Hooks	C-Hooks (SH-13) Section 7.3.3.15.1 Page 227 Program Target: Replace C-Hooks on at least 40 structures in HFRA. SCE will strive to replace all C-hooks in HFRA, currently estimated between 50 - 60 structures Status Update: Sites and locations finalized. Environmental screenings and engineering design completed. Replaced C-Hooks on
Tree Attachment	Tree Attachment Remediation (SH-10) Section 7.3.3.3.2 Page 217		16 structures in Q3.
Tree Attachment Remediation 84%	Program Target: Remediate 500 tree attachments. SCE will strive to complete over 600 tree attachment remediations, subject to resource constraints and other execution risks.	Long Span	Long Span Initiative (SH-14) Section 7.3.3.12.1 Page 226 Program Target: Complete all field assessments for locations and
remediations	Status Update: Activity has made significant progress but remains off track due to slow ramp up in certain communities and environmental delays. Remediated ~420 tree attachments as compared to a plan of 430 by Q3. Expect to meet year end target.	Initiative	corresponding remediations. Remediate the highest risk locations, estimating that 300, and up to 600, locations will be remediated in 2021, subject to the completion timeline for inspections, resource constraints and other execution risks.
Legacy Facilities	Legacy Facilities (SH-11) Section 7.3.3.17.2 Page 231 Program Target: Perform evaluation on 5 circuits for possible hardening. Create 2 project plans based on 2020 engineering assessments on low voltage site. Complete 12 additional assessments on grounding studies/lighting arrestor.		Status Update: ~160 spans* of available scope have been remediated to date in the manner described in the WMP. SCE clarifies that it will remediate the 300-600 locations <i>in</i> 2021, subject to completion timeline , resource constraints and other execution risks. Additional scope is being released for completion.
	Status Update: Completed milestone of assessing five circuits in 2021 and completed grounding studies/lighting assessments on 12 sites. Plan to complete grounding and lightning arrestor studies by Q4. Assessments of low voltage sites were completed in Q2.	Vertical	Vertical Switches (SH-15) Section 7.3.3.17.3 Page 232 Program Target: Install 20 switches in HFRA. SCE will strive to install 30 switches in HFRA.
Microgrid	Microgrid Assessment (SH-12) Section 7.3.3.8.2 Page 222 Program Target: Perform internal assessment of vendor bid and location options. If assessment favorable, issue engineering procurement	Switches	Status Update: Installed 3 switches through Q3, plan to continue in Q4 with completion of ~20 total switches by year end.
Assessment	construction (EPC) contract. Status Update:: Site owner's August vote was not in favor of proceeding with signing a contract for land lease at this time. SCE has engaged other customers but has been unsuccessful in securing an alternative customer sites. Site owner is expected to re-engage and revisit land lease contract in Q4.	* Additional spa	ns that have been remediated in 2021 are being evaluated for inclusion Energy for What's Ahead ^{ss} 6

Inactive Under Review Complete

On Track

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

Inspections

Ī	YTD Status			_
	Ground	Distribution Ground / Aerial Inspections and Remediations (IN-1.1) ¹ Section 7.3.4.9.1 Page 242	Transmission Infrared	Infrared Inspection, Corona Scanning and High Definition (HD) Imagery of Transmission facilities and equipment (IN-4)
	Aerial	 Program Target: Inspect between 163,000 and 198,000 structures in HFRA, via both ground and aerial inspections. Status Update: Completed ~185,000 ground inspections and 170,000 serial inspections. 	Inspections	Section 7.3.4.5 Page 239 Program Target: Inspect 1,000 transmission circuit miles on HFRA circuits
	109%	~178,000 aerial inspections.		Status Update: Resumed inspections in Q3 after delays due to malfunctioning camera equipment and travel restrictions impeding equipment repair. ~450 circuit miles completed through Q3 and plan complete goal in Q4.
	YTD Status Ground 126% Aerial	Transmission Ground / Aerial Inspections and Remediations (IN-1.2) ¹ Section 7.3.4.10.1 Page 248 Program Target: Inspect between 16,800 and 22,800 structures in HFRA, via both ground and aerial inspections. Status Update: Completed ~21,100 ground and ~20,600 aerial inspections.	Generation Inspections	Generation Inspections and Remediations (IN-5) Section 7.3.4.9.2 Page 246 Program Target: Complete inspection of 181 generation-related assets in HFRA Status Update: Completed ~230 Generation inspections and will continue in Q3.
	123% Distribution Infrared Inspections 100% Targeted Circuits Inspected	Infrared Inspection of energized overhead distribution facilities and equipment (IN-3) Section 7.3.4.4 Page 238 Program Target: Inspect approximately 50% of distribution circuits in HFRA. Status Update: Completed inspections on ~50% of distribution circuits in HFRA, approximately 4,400 circuit miles completed.	Inspection and Maintenance Tools	 Inspection and Maintenance Tools (IN-8). Section 7.3.4.3.1 Page 236 Program Target: Transition Aerial and Transmission ground inspection process to a single digital platform with at least 75% of inspectors trained to use the tool by year end 2021. Deploy scope mapping tool with GIS visualization to Distribution. Status Update: Behind plan due to technical challenges which have caused significant delays with development of the Transmission Ground Inspection application. The training portion of the goal will not be completed in 2021 due to the technical challenges. The Distribution and Transmission Aerial applications are on track for year end. While this activity is at risk for not meeting its year end target, it is not intended to directly mitigate wildfire risk in 2021.

Energy for What's Ahead[™]



Dead and Dying

Tree Removal*

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

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

Vegetation Management

HTMP*

73%

Trees Assessed

Hazard Tree Management Program (VM-1)¹ Section 7.3.5.16.1 Page 278

Program Target: Assess between 150,000 and 200,000 trees for hazardous conditions and perform prescribed mitigations in accordance with program guidelines and schedules

Status Update: ~108,800 trees have been assessed through Q3 and prescribed mitigations are on track in accordance with program guidelines and schedules. However, based on lower than anticipated find rate of trees with strike potential resulting from inspections and lower than anticipated number of subject trees that require subsequent mitigation, this activity may be at risk for not meeting its year end target.

Dead and Dying Tree Removal (VM-4)¹

Section 7.3.5.16.2 Page 280

Complete

Program Target: Perform Drought Relief Initiative (DRI) annual inspections and perform prescribed mitigations in accordance with program guidelines and schedules.

Status Update: On track to complete the first and second circuit passes as planned. ~1050 assessments completed through Q3. Continuing to monitor contractor resource plans to ensure timely completions.

Expanded Pole Brushing

56%

Poles Cleared

Expanded

Legacy Facilities

Expanded Pole Brushing (VM-2)

Section 7.3.5.5.1 Page 265 Program Target SCE plans to pole brush between 200,000 and 300,000 Distribution poles

Status Update: Cleared ~112,200 poles. Continue to experience challenges with access constraints and the ability to retain crews. Process improvements to relieve access constraints implemented late in the guarter and expected to increase production. While this activity is at risk for not meeting its year end target, the activity is prioritizing completion of poles to comply with PRC 4292 including poles that have equipment that is likely to spark a fire.

Expanded Clearances for Legacy Facilities (VM-3)

Section 7.3.5.5.2 Page 266 Program Target: Treat 46 sites **Clearances for**

Status Update: Completed - 47 sites have been treated.

VM Work Management **Tool (Arbora)**

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

Section 7.3.5.19 Page 282 Program Target: Continue Work Management Tool (Arbora) agile development and releases in accordance with project plan complete full rollout of Dead & Dying Tree Removal and Hazard Tree Mitigation, and conduct discovery and design architecture associated with Line Clearing

Status Update: Completed initial discovery and design architecture for the routine Line Clearing portion of this activity and deployed as planned. However, The Hazard Tree Management Program and Dead and Dying Tree Removal has had to re-design architecture due to data volume limitations and inability to calculate and assess risk scores, requiring additional development time and moving timeline to 2022. While this activity is at risk for meeting its year end target, it is not intended to directly mitigate wildfire risk in 2021.

Inactive Under Review Complete

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

Emergency Preparedness Activities

Community Meetings	Customer Education and Engagement – Community Meetings (DEP-1.2) Section 7.3.10.1.1 Page 324 Program Target: Host at least 9 virtual community meetings. SCE will complete additional meetings as needed in 2021, based on PSPS impact to communities, up to 18	Customer Research and Education	Customer Research and Education (DEP-4) Section 7.3.10.1.4 Page 333 Program Target: Administer at least 4 PSPS-related surveys (PSPS Tracker Survey to capture feedback on the 2020 events, wildfire Community meeting feedback survey, CRC/CCV feedback survey, In-Language Wildfire Mitigation Communications Effectiveness Pre/Post Survey)
	Status Update: Completed 9 virtual community meetings through Q3.		Status Update: Completed the Business report and began In- Language Wildfire Mitigation Communications Effectiveness Survey in Q3. Also began conducting surveys in Q3 for CRC/CCV activations for PSPS events, and plan to collect/aggregate feedback to date for CRC/CCV visitation surveys in Q4 (contingent upon PSPS events and deployment of resources).
Marketing Campaign	Customer Education and Engagement – Marketing Campaign (DEP-1.3) Section 7.3.10.1.3 Page 331 Program Target: PSPS Awareness goal: 50% Status Update: As of the end of Q3 PSPS awareness was at ~59%.	Aerial Suppression	Aerial Suppression (DEP-5) Section 7.3.10.3 Page 337 Program Target: Will enter a Memorandum of Understanding (MOU) with CAL FIRE and local county fire departments to provide standby cost funding for up to 5 aerial suppression resources strategically placed around the SCE service area.
SCE Emergency			Status Update: All 3 MOUs have been signed by SCE and each respective county. Payments disbursed to all 3 counties in Q2.
Responder Training	IMT (Incident Management Team): Have all PSPS IMT and Task Force me UAS (Unmanned Aircraft System): In 2021 SCE plans to expand the progr Status Update:		

IMT: Complete – PSPS IMT trainings and qualifications were completed in Q2.

UAS: 2021 target is to train 56 employees (6 carryover from 2020 WMP and 50 new in 2021 WMP). Through Q3, 25 operators have taken and passed the FAA 107 exam. While this activity is at risk for not meeting its year end target, it is not intended to directly mitigate wildfire risk in 2021.



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

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

Data Governance

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

Section 7.3.7.1 Page 303 Program Target:

WiSDM:

- Complete the WisDM solution analysis and design for centralized data repository ٠
- ٠ Initiate staggered consolidation of datasets from SCE Enterprise systems

Ezy Data:

Wildfire Safety

Data Mart

and Data

Management

- Implement the cloud platform infrastructure for Ezy Data
- Build a solution for data consumption, storage and visualization of inspection data (LiDAR, HD video, photograph) •
- Enable an environment for Artificial Intelligence (AI) assisted analytics ٠
- Ezy Data is on track for meeting goal in Q4 ٠
- WiSDM at-risk due to delays in initiating staggered consolidation of datasets to the centralized data repository from SCE Enterprise systems.
 - Delays due to WiSDM architects reprioritized to work on initiatives mitigating PSPS risk in 2021 and also delayed due to additional analysis being performed on which platform to proceed with in order to find the best solution
- While this activity is at risk for not meeting its year end target, it is not intended to directly mitigate wildfire risk in 2021.

Status Update:





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

PSPS

	1 51 5
Customer Care	Customer Care Programs (PSPS-2) ¹ Section 7.3.6.5.2 Page 294 Program Target: • Community Resource Centers (CRC): Adjust as needed.
Programs	 Community Resource Centers (CRC): Adjust as needed. Community Resiliency Programs: Goals for Resilience Zones dependent on community leaders identifying potential customers. Targeting to obtain 5 to 10 agreements. Complete installation of microgrid islanding (CREI) capability on second pilot customer.
	 Customer Resiliency Equipment: Critical Care Backup Battery (CCBB): Expand program to eligible MBL customers who are enrolled in CARE/ FERA and reside HFRA. Expand marketing and outreach plans. Well Water & Residential Battery Station Rebates: Enhance the programs to increase customer participation by 20% - 40%
	 Status Update: The refreshed CRC strategy for 2021 includes evaluation of circuits that will likely be impacted by PSPS events. 64 total CRC sites as of end of Q3. Community Resiliency Programs behind plan due to delays in identifying customers willing to participate; will continue to identify additional customer sites in Q4. Four customer agreements have been executed through Q3. Expecting to have a total of 8 resiliency zones to be in effect for fire season. CCBB program was completed in Q2 after reaching out to eligible Medical Baseline Customers and establishing additional partners (CBOs) Well Water & Residential Battery Station Rebate: Completed - ~1,800 enrollments through Q3.

Appendix

Behind Plan Activities Details



On Track

Behind Plan, Likely to Meet Year-end Goal

YTD Status	Current Goal	Narrative
	 SA-2: Fire Potential Index 1) Backcast 20 years of FPI using FPI 2.0 by May 2021 to determine historical performance compared to current FPI 2) Run FPI 2.0 in parallel with the current FPI and compare outputs for the 2021 fire season 	 Summary: SCE is improving the accuracy of its FPI (referred to as FPI 2.0) through the integration of historical weather and vegetation data for more precise PSPS decision-making. Team experienced a delay in finalizing the circuit-level FPI 2.0 output, which resulted in delayed documentation of the FPI 2.0 methodology. Documentation of this methodology is now expected to be completed by early Q4. Progress: Producing circuit level FPI 2.0 output was completed in September Risks or Challenges: None Actions to Improve Performance / Get Well Plan: Documentation of the FPI 2.0 methodology began in September and is expected to be completed in Q4
	SA-8: Fire Science Enhancements Evaluate current wildfire events in context of 40- year history of wildfires.	 Summary: Vendor is behind schedule for producing model output for review due to supporting initiatives that inform PSPS decision making in 2021. While the historical climatological data output is likely to be produced and reviewed in 2021 the development of climatological products will not be completed in 2021. Progress: No notable progress has been made since last quarter Risks or Challenges: Vendor redirected to work on initiatives mitigating PSPS risk in 2021, as a result development of climatological products that support evaluation of current wildfire events will not be completed in 2021 Actions to Improve Performance / Get Well Plan: Will continue to work with vendor in Q4 2021 and 2022 to make progress in producing climatological data output and evaluating quality While this activity is at risk for not meeting its year end target, it is not intended to directly mitigate wildfire risk in 2021

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YTD Status	Current Goal	Narrative
		Summary: 87 DFA devices have been installed ahead of planned dates but are not yet in-service due to material delays in initial network antenna installations. Plan to complete goal in Q4.
	SA-9: Distribution Fault Anticipation Complete installation of 120 DFA units on circuits in SCE's HFRA and continue evaluation of DFA technology which may result in SCE installing up	 Progress: SCE has installed ~87 DFA devices ahead of originally planned 77 Telecom material delays have been resolved, but SCE awaiting confirmation of resource availability to support retroactive installation of telecom equipment on existing 87 DFA devices The remaining 33 DFA devices are expected to be installed as planned; Telecom Crews will install the telecom equipment concurrently Risks or Challenges: Qualified electrical checkers are needed to support installation of network antennas on the initial 87 devices (14)
	to 150 unit.	locations); if resources are unavailable it could delay installation of the antennas
		 Actions to Improve Performance / Get Well Plan: SCE is working to confirm qualified electrical checkers to coordinate scheduling of network antenna installations for the ~87 installed DFA devices

Inactive Under Review Complete

Behind Plan, Likely to Meet Year-end Goal

On Track

2021 WMP Activity Narratives

Off-track or other notable activities

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YTD		
tatus	Current Goal	Narrative
	SH-2: Undergrounding ¹ Install 4 miles of undergrounded HFRA circuits SCE will attempt to install 6 miles of	 Summary: Project plan calls for 1 mile to be completed in September. While this was completed and operational in the field, the work order was not marked as complete in the system of record until early Q4. There are no substantial risks to this project. Progress: Team has completed civil construction for over 5 miles year-to-date The one mile that use not marked as complete in the system of record in September use undeted in early Q4.
	undergrounded HFRA circuits, subject to resource constraints and other execution risks, such as permitting, environmental or coordinating with other utilities.	 The one mile that was not marked as complete in the system of record in September, was updated in early Q4 to show complete Risks or Challenges: No risks exist for this project to achieve the WMP target of 4 circuit-miles Actions to Improve Performance / Get Well Plan: Electrical portions of pending work are on-schedule At least 4 miles are on-track for year-end completion

Inactive Under Review Complete On Track

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

Behind Plan, Likely to Meet Year-end Goal

2021 WMP Activity Narratives

Off-track or other notable activities

Inactive	Under Review	Complete	On Track	Behind Meet Y

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

YTD Status	Current Goal	Narrative
		Summary: While all preparations were in place for a Q3 Open Phase Detection device installation, one required a planned outage and was rescheduled to October due to external project delays. Accordingly, the device installation has shifted to October. An additional delay has been incurred due to a required outage scheduling conflict, which pushed another installation from October to December.
	SH-8: Transmission Open Phase Detection	Progress:Installed 6 Open Phase Detection devicesRequired October outages are on schedule
	Install Transmission open phase detection devices on 10 circuits	 Risks or Challenges: Planned Outage rescheduling from Q3 to October has delayed one device installation Planned Outage rescheduling from October to December, this installation does not require outage
		 Actions to Improve Performance / Get Well Plan: SCE has rescheduled device installation to October for one line Rescheduled installation of one line and will be performed in parallel with current October plan All preparations are underway for additional device installation scheduled for Q4



YTD Status	Current Goal	Narrative
	SH-10: Tree Attachment Remediation Remediate 500 tree attachments	Summary: 1% behind plan due to slow ramp up in one community and environmental delays. SCE is still confident in finishing by year end, SCE has released all annual scope (over 800) to region.
		 Progress: Released over ~800 tree attachments to regions to complete Maintained a viable pace for past 3 months
		 Risks or Challenges: Have faced several environmental delays due to bird nesting, wetlands, etc. Originally activity was facing resourcing issues due to lack of available resources nation-wide There have been more slowdowns recently due to retaining resources; however, SCE is diverting additional resources to assist with tree attachment remediations
		 Actions to Improve Performance / Get Well Plan: Completion rate has accelerated recently All scope has been released to execute work
	SH-12: Microgrid Assessment	Summary: Site owner's August vote was not in favor of proceeding with signing a land lease contract at this time. SCE has engaged other customers but has been unsuccessful in securing alternative customer sites. Site owner is expected to re-engage and revisit land lease contract in Q4.
	Perform internal assessment of vendor bid and location options. If assessment is favorable, SCE will issue engineering, procurement, construction (EPC) contract to a vendor that meets SCE's design requirements.	 Progress: SCE has completed preliminary Civil and full Environmental reviews of original customer site SCE has identified potential alternative site in similar area, which would allow majority of design work to be used going forward; however, site owner has become unresponsive
		 Risks or Challenges: Obtaining favorable land agreements has been challenging due to external dependencies Working with site owner to meet internal timelines is subject to unpredictability in early partnering stages
		 Actions to Improve Performance / Get Well Plan: Pending re-engagement from site owner



YTD Status	Current Goal	Narrative
	SH-14: Long Span Initiative Remediate 300, up to 600 Long Spans	 Summary: 28% behind plan due to vendor resource constraints. ~160 spans* of available scope have been remediated to date in the manner described in the WMP. SCE clarifies that it will remediate the 300-600 locations <i>in</i> 2021, subject to completion timeline, resource constraints and other execution risks. Additional scope is being released for completion. Progress: ~160 spans* have been remediated year to date Risks or Challenges: Competing resources for other high priority commodities Actions to Improve Performance / Get Well Plan: Additional scope is being released after acceptable criteria is determined and eligible spans are identified
	SH-15: Vertical Switches Install 20 switches in HFRA	 Summary: ~20 switches have been released to regional construction; however, GRC Decision did not authorize funding for the entire originally planned scope. Work will continue for those switches already part of planned construction. Progress: Released ~20 switches to regional construction Risks or Challenges: GRC Decision authorized funding for less than original scope All released switches are on track for year-end completion

YTD Status	Current Goal	Narrative
	IN-8: Inspection and Maintenance Tools Transition Aerial and Transmission Ground inspection processes to a single digital platform with at least 75% of inspectors trained to use the tool by year end 2021. Key Al/ML models leveraged by the Aerial inspection process; Deploy scope mapping tool with GIS visualization to Distribution Planning and Engineering users; Deploy remediation mobile software and iPad devices for transmission and distribution.	 Summary: This application is made up of four modules: three are on track for year end target , and one has fallen behind due to technical challenges such as data volume constraints and offline syncing capabilities. This activity is currently at risk for meeting year end target. The goal for training 75% of inspectors by year end will not be met in 2021 due to software delays. Progress: Training of inspectors by year end will not be met in 2021 Trarget for Scope Mapping Tool (SMT) implementation is delayed due to data validation issues Risks or Challenges: Training 75% of inspectors by year end will not be met due to delays and current schedule Resource constraints due to the same senior patrolmen being trained on the system who are also responsible for remediations, PSPS patrols, and system restoration in the event of a wildfire Actions to Improve Performance / Get Well Plan: Training currently planned for Q1 2022 While this activity is at risk for not meeting its year end target, it is not intended to directly mitigate wildfire risk in 2021

Inactive Under Review Complete On Track Behind Plan, Likely to Meet Year-end Goal

Inactive	[]	Under Review
	1_1	

Complete On Track

Behind Plan, Likely to Meet Year-end Goal

YTD Status	Current Goal	Narrative
	VM-2 Pole Brushing SCE plans to pole brush between 200,000 and 300,000 Distribution poles	 Summary: Under performed the YTD cumulative goal of 157K by ~ 45K poles. Current prime contractor continues not to meet productivity expectations noting access constraints and difficulty retaining crews Two of the prime contractor's zones were reassigned late in September and a third was reassigned in early Q4 The two additional contractors bring 14 additional crews to start with; continuous ramp up efforts expected through year-end focused on achieving minimum clearance goal Program goal may recover to "On-Track" at the end of Q4 as the additional crews acclimate and stabilize Progress: ~112,200 poles have been brushed year-to-date (versus 157,600 expected) Risks or Challenges: Prime contractor continues to be challenged to meet targets Loss of experienced crews No Access poles
		 Actions to Improve Performance / Get Well Plan: Process improvements to relieve access constraints implemented in September expected to increase production Redistribution of crews to less constrained areas is also expected to spike production in early Q4 Additional contractor crews onboarded and started work in October with continued ramp up expectations addressed to meet goal While this activity is at risk for not meeting its year end target, the activity is prioritizing completion of poles to comply with PRC 4292 including poles that have equipment likely to spark a fire



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

YTD Status	Current Goal	Narrative
	VM-6: VM Work Management Tool (Arbora)	Summary: VM Work Management Tool activity has fallen behind due to mobile product data volume limitations during the pilot. New design architecture will be utilized to remedy the issue but the critical need to calculate and assess risk scores is currently not available in new architecture, requiring additional development time and moving timeline to 2022.
Continue Work Management Tool (Arbora) agile development and releases in accordance with project plan – complete full rollout of Dead & Dying Tree Removal and Hazard Tree Mitigation, and conduct discovery and design architecture associated with Line Clearing	 Progress: The Arbora project now has a projected HTMP/DRI Pilot Deployment delivery date of 2022 Even with previous development challenges, the project team has been able to complete discovery and design architecture for Line Clearing (Routine) 	
	rollout of Dead & Dying Tree Removal and Hazard	 Risks or Challenges: Vendor inability to send data for offline use and editing Actions to Improve Performance / Get Well Plan:
	conduct discovery and design architecture associated with Line	 Due to development delays by SCE technical partners, there is no current opportunity to shorten development timeline to meet VM-6 WMP goal. With that said, adjusted timeline does currently allow us to stay on-track for our "Line Clearing" (Routine) deployment timeline. While this activity is at risk for not meeting its year end target, it is not intended to directly mitigate wildfire risk in 2021



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

YTD Status	Current Goal	Narrative
		Summary: The activity is currently off-track due to only ~25 operators passing the FAA 107 exam versus a year-to-date plan of 35. This activity is currently at risk for meeting their year end target.
	DEP-2: Train 50 UAS Operators In 2021 SCE plans to expand the program by an additional 50 operators over 2020 levels	 Progress: 2021 target is to train 56 operators (6 carryover from 2020 WMP and 50 new in 2021 WMP). Through Q3, 25 operators have taken and passed the FA 107 exam
		 Risks or Challenges: ~31 additional people required to pass the FAA 107 exam by end of Q4 to meet target PSPS events and emergent work in Q4 may take certain troublemen groups away from taking the exam The pause on in-person training has impacted the activity
		 Actions to Improve Performance / Get Well Plan: Planning additional webinars (not previously part of the UAS training program) to re-engage trainees who have not taken the FAA exam with the UAS training materials While this activity is at risk for not meeting its year end target, it is not intended to directly mitigate wildfire risk in 2021



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

YTD Status	Current Goal	Narrative
	 DG-1: Data Mart WiSDM: Complete the WisDM solution analysis and design for centralized data repository Initiate staggered consolidation of datasets from SCE Enterprise systems Ezy Data: Implement the cloud platform infrastructure for Ezy Data Build a solution for data consumption, storage and visualization of inspection data (LiDAR, HD video, photograph) Enable an environment for Artificial Intelligence (AI) assisted analytics 	 Summary: The activity is at-risk for year end target due to delays in initiating staggered consolidation of datasets to the centralized data repository from SCE Enterprise systems. Delay due to software architects reprioritized to work on initiatives mitigating PSPS risk in 2021 and expanding scope of WiSDM to leverage investment in new vendor. Additional analysis was performed to select the platform solution to proceed with. Likelihood of meeting the year end goal is dependent on the time to complete the SOW and begin the onboarding process with vendor. Progress: Ezy Data Project: Completed implementation of foundational components Implemented solution for data consumption, storage and visualization in support of Aerial Inspections process Artificial Intelligence platform design activity in progress WiSDM: WiSDM solution analysis and design for centralized data repository delayed. Plan to complete by mid-Q4. Drivers for delay include: Additional analysis of the PSPS action plan Inclusion of new tendor is solution option. Likelihood of meeting the year end goal is dependent on the time to complete the contract and begin the onboarding process with vendor Risks or Challenges: Additional analysis being performed on which platform to proceed with in order to find the best solution Likelihood of meeting the year end goal is dependent on the time to complete the contract and begin the onboarding process with vendor Risks or Challenges: Additional analysis being performed on which platform to proceed with in order to find the best solution New vendor contract completion timeline will impact WiSDM project start Actions to Improve Performance / Get Well Plan: Work to complete contract process with vendor expeditiously While this activity is at risk for not meeting its year end target, i



On Track

Behind Plan, Likely to Meet Year-end Goal

YTD Status	Current Goal	Narrative
		Summary: Four Customer Agreements have been executed year to date in 2021 but expecting a total of 8 resiliency zones to be in effect for fire season.
	PSPS-2: Resiliency Zone ¹ (RZ) Goals for Resilience Zones dependent on community leaders identifying potential customers. Targeting to obtain 5 to 10 Agreements.	 Progress: Outreach conducted to 17 potential customer sites including 3 Tribal Nations over the last 5 months Suppliers have conducted site visits at two of the four sites with agreements; furthermore, engineering drawings are nearing completion for these sites. SCE has also identified a potential site in Cabazon which is a defined RZ per the pilot criteria Risks or Challenges: Activity is dependent on community leaders providing resiliency zone sites and customers' willingness to participate in the program Some customers have installed their own switching equipment and purchased generators Tribal Nations did not participate in the program Actions to Improve Performance / Get Well Plan: SCE will continue to pursue community leaders to share potential customer sites