SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

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Managing Director, State Regulatory Operations

January 31, 2020

ADVICE 4153-E
(U 338-E)

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA
ENERGY DIVISION

SUBJECT: Southern California Edison Company's Quarterly Advice Letter Pursuant to Assembly Bill 1054 Regarding the Implementation of Its Approved Wildfire Mitigation Plan and Its Safety Recommendations

Southern California Edison Company (SCE) hereby submits this Tier 1 Advice Letter (AL) detailing the implementation of its approved 2019 Wildfire Mitigation Plan (WMP),[1] recommendations of the most recent safety culture assessment, and a statement of the recommendations of its board of directors' safety committee[2] (Committee) meetings that occurred during the quarter.

PURPOSE

The purpose of this advice letter is to comply with the provisions of Public Utilities Code (PUC) Section 8389(e)(7), established by California Assembly Bill (AB) 1054, for the second quarter following SCE's receipt of its Initial Safety Certification. As directed by the statute, this AL provides details of the implementation of SCE's 2019 WMP, a status update relative to SCE's most recent safety culture assessment, and a statement of the recommendations of SCE's Committee meetings that occurred during the quarter.

BACKGROUND

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

> The executive director of the commission 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 tier 1 advice

[1] *See* Decision (D.)19-05-038.
[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."

letter on a quarterly basis that details the implementation of both its approved wildfire mitigation plan and recommendations of the most recent safety culture assessment, and a statement of the recommendations of the board of directors safety committee meetings that occurred during the quarter. The advice letter shall also summarize the implementation of the safety committee recommendations from the electrical corporation's previous advice letter filing. If the division has reason to doubt the veracity of the statements contained in the advice letter filing, it shall perform an audit of the issue of concern.

SCE provides the required information as indicated below:

(1) **Implementation of Wildfire Mitigation Plan**

On October 25, 2018, the California Public Utilities Commission (Commission or CPUC) opened Rulemaking (R.)18-10-007 to implement the provisions of Senate Bill (SB) 901 related to electric utility wildfire mitigation plans. New provisions of PUC 8386, enacted as part of SB 901, require all California electric utilities to prepare and submit wildfire mitigation plans that describe the utilities' plan to prevent, combat, and respond to wildfires affecting their service territories. On February 6, 2019, SCE submitted its 2019 WMP that describes strategies, programs, and activities that were in place, being implemented, or were under development at the time, to proactively address and mitigate the threat of electrical infrastructure-associated ignitions that could lead to wildfires, further harden the electric system against wildfires, and enhance wildfire suppression efforts.

After an extensive review process that included discovery, workshops and comments, the Commission, on May 30, 2019, found that SCE's WMP contained each of the required statutory elements and approved SCE's 2019 WMP in D.19-05-038, subject to certain reporting, metrics, data and advice letter requirements. Since approval of its 2019 WMP, SCE has complied with the follow-up requirements ordered in D.19-05-038 and D.19-05-036 including submitting three Tier 1 advice letters[3] and one Tier 3 advice letter Off Ramp

[3] On July 5, 2019, SCE submitted the following three Tier 1 advice letters in compliance with D.19-05-038: Advice 4030-E that describes SCE's wildfire mitigation work that it has completed, plans to complete, and may do during the 2019 WMP year in high fire risk areas (HFRA) outside the Commission's High Fire Threat District (HFTD) map; Advice 4031-E that describes SCE's Enhanced Overhead Inspections (EOI) initiative by clarifying the differences from SCE's existing inspections, explaining what the EOI involve, the specific activities that will be performed, and the data that will be collected as well as databases related to EOI; and Advice 4032-E that describes and justifies covered conductor installation outside the Commission's HFTD map as part of SCE's Wildfire Covered Conductor Program (WCCP).

Report,[4] and submitting its Data Collection on Wildfire Mitigation Plans Report.

SCE is tracking 58 specific wildfire-related mitigation activities included in its 2019 WMP. Some of these activities such as risk-informed tree removals, Enhanced Overhead Inspections, and installing covered conductors are designed to reduce the risk of ignitions associated with utility infrastructure. Others are targeted towards situational awareness and emergency preparedness in the event a wildfire occurs. Still others are associated with customer and community notifications and associated customer-impact mitigations regarding Public Safety Power Shutoff (PSPS) events. SCE is also exploring and evaluating several alternative technologies to potentially improve its ability to prevent and better respond to wildfire-related events. In Exhibit A, SCE presents detailed information about the implementation status of each of these wildfire-related mitigation activities. Exhibit A sets forth SCE's current (as of December 31, 2019) progress towards meeting the wildfire mitigation programs and activities along with 2019 goals and metrics in its Commission-approved 2019 WMP.

Overall, SCE has made substantial progress in implementing its wildfire mitigation plans by year-end 2019. As referenced in Exhibit A, SCE fully completed 54 of the 58 activities identified in its plan and greatly exceeded its plan in some areas, including:

- Installing 372 circuit miles of covered conductor, nearly four times the target, and 1,421 composite poles (relative to a target of 1,100);
- Improving situational awareness by installing 357 weather stations and 91 HD cameras, increases over the targets of 315 and 62, respectively; and
- Clearing brush and vegetation around more than 159,000 poles (target of 100,000).

In many cases, SCE was able to accelerate activities into 2019 that provide greater and earlier reduction of wildfire risk than the plan anticipated as well as additional data to further enhance future plans. In limited instances, SCE did not meet its initial 2019 plans due to resource constraints, operational challenges and reprioritizing activities to address emergent issues such as PSPS events. SCE has and is continuing to analyze operational data and modify its planning and deployment approaches to help improve performance in 2020 and beyond. SCE has already applied some of the lessons learned from implementing the

[4] D.19-05-036 requires IOUs to submit two Tier 3 advice letters entitled "Reports on Possible Off Ramps" describing any concerns about the effectiveness of any program in the WMPs, which are due six and twelve months after the May 30, 2019 effective date of D.19-05-036, respectively. On December 2, 2019, SCE submitted a Tier 3 advice letter on Possible Off Ramps for its 2019 WMP. Advice 4120-E describes SCE's proposals to modify, reduce, increase, or end wildfire mitigation measures in SCE's 2019 WMP, as appropriate.

wildfire mitigation activities and made appropriate modifications to its WMP activities as outlined in SCE's "Off Ramp" Advice Letter report.[5]

(2) **Implementation of Most Recent Safety Culture Assessment**

As noted in its initial safety certification and in its last quarterly advice letter submittal,[6] SCE has not yet undergone a CPUC-led safety culture assessment. Pursuant to PUC Section 8389(d)(4), a CPUC-led safety culture assessment for SCE may not occur until early 2021. Notwithstanding this, 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. Over the past several years, SCE has increased management focus on safety oversight, accountability, and partnering with employees, contractors, and communities to improve worker and public safety. In 2019, SCE completed safety culture training for its employees and leaders: (1) Switch, a cognitive behavioral training course designed to help employees take ownership of safety and strengthen safety leadership; and (2) Engage/Connect workshops that provide practical tools for leaders to support a strong safety culture and influence safe behaviors aligned with SCE's values. The core concepts of this training have been embedded in new employee orientation and new leader trainings. SCE continues to improve its safety culture via in-person meetings, trainings, corporate messaging and the incorporation of feedback from all levels of the organization. SCE looks forward to working with the CPUC and other interested stakeholders to further review its safety culture and build upon existing efforts to strengthen it.

(3) **Recommendations of Safety and Operations Committee**

The Committee had two meetings during the fourth quarter of 2019 (on October 23 and December 11). In addition, on October 23, SCE's Board of Directors elected Ms. Carey Smith to the Board and appointed her to the Committee. Ms. Smith is the President and Chief Operating Officer of Parsons Corporation and brings extensive safety and operational management expertise to the Committee. See Exhibit B for details on Ms. Smith's qualifications and safety experience. During the fourth quarter meetings, the Committee focused on wildfire and safety issues in the following main categories: Wildfire Safety; Employee, Contractor, and Public Safety; and SCE Safety Goals, Performance and Metrics. Each of these areas is separately addressed below.

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5 *See* December 2, 2019 Advice 4120-E.
6 Advice 4089-E.

Wildfire Safety

The Committee discussed wildfire safety and mitigation issues and developments at both fourth quarter 2019 meetings and discussions covered, among other subjects, WMPs, the PSPS program, lessons learned from wildfires, and potential additional wildfire risk reduction measures. The Committee discussed with management the lessons learned from the report issued by the Commission's Safety and Enforcement Division (SED) on the Camp Fire and the Pacific Gas and Electric Company (PG&E) inspection procedures. Management reported that it is reviewing SCE's inspection procedures in light of the findings in the SED report and the Committee recommended that management report back on its lessons learned from the review. Management also presented the Committee with their analysis of ignition drivers (as of October 2019). The analysis confirmed that SCE's wildfire mitigation activities are focused on the appropriate risk reduction measures and that a significant percentage of year-to-date ignitions in high fire threat areas would have been avoided by the mitigations being deployed as per the WMP. The deployment of the mitigations is largely on schedule as noted in Section 1 above and is appropriately informed by risk-prioritization. The Committee recommended that management provide an overview of the additional engineering and design standard changes that could reduce ignition risk in addition to the ongoing 2019 WMP work at the next Committee meeting.

As previously recommended by the Committee at the August 2019 meeting, the Committee received updates on the implementation of the 2019 WMP, including the status of each of the nine metrics and factors contributing to the status. Management reported on the reasons that SCE is not expected to timely remediate certain P2[7] notifications but noted that the highest-risk remediation work had been completed. SCE's inability to timely remediate all P2 notifications found during EOI was primarily due to weather and end-of-year resource constraints. Management noted that external factors such as permitting delays and internal operational challenges also contributed to the less-than-targeted number of hazard tree removals. The Committee and management discussed the upcoming 2020 WMP filing, which has been informed by risk analyses to help reduce the likelihood of utility infrastructure-related fires, allocate funding and resources to higher risk assets and locations, and reduce customer impact from wildfire risk mitigation activities such as PSPS events. The Committee agreed to add a meeting to specifically review the 2020 WMP before it is submitted to the Commission.

The Committee and management discussed SCE's PSPS implementation, in particular, the lessons learned from SCE's and from PG&E's experience during the October 2019 statewide PSPS events and the resulting operational enhancements and mitigations under consideration. Management reported on its initiatives to improve the public notification process by working with the California

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[7] *See* slides 13 and 14 of Exhibit A hereto.

Office of Emergency Services (Cal OES) and to ease customer burdens by working with local communities to establish additional community resource centers and to add mobile community crew vehicles in frequently de-energized areas, providing potable water to customers who rely on well water systems, and establishing a program to grant food and medication spoilage claims under specified circumstances. SCE's sectionalization capability to isolate circuit segments and reliance on actual field conditions prior to activating PSPS events has helped reduce the number of customers impacted by PSPS in its service territory. For example, during the statewide October 2019 events, largely as a result of sectionalization and more precise weather forecasting, SCE was able to limit the cumulative impact of the events to less than 200,000 customers, as compared to more than 2 million in Northern California. Though the frequency and scope of PSPS events are expected to lessen as more of SCE's WMP mitigations are implemented, the Committee continues to expect PSPS to be a tool used during severe weather and high Fire Potential Index (FPI) events to mitigate wildfire risk, along with ongoing WMP work.

Employee/Contractor/Public Safety

The Committee discussed employee, contractor and public safety issues and initiatives at its fourth quarter 2019 meetings. Management updated the Committee on significant safety events and the immediate actions that were taken while the cause evaluations of the events are underway at each meeting. On employee safety, the Committee discussed the employee injury rates, as well as the planned 2020 employee safety activities that are intended to reinforce the ongoing safety culture transformation, as referenced in section 2 above, and expand the tools available to employees to reduce the risk of serious injuries and fatalities. On contractor safety, the Committee discussed the actions taken by management to hold contractors accountable for recent significant safety events and their safety performance. The Committee also discussed the areas of focus for 2020 on contractor accountability, oversight and collaboration. On public safety, the Committee discussed the newly launched outreach plan to educate private landscapers and gardeners on electrical hazards. The Committee recommended that an update on public safety be provided at the next Committee meeting.

SCE Safety Goals, Performance and Metrics

As discussed with the full Board of Directors in June 2019, the Committee discussed potential changes to SCE's safety and operational goals and related performance metrics at both of the fourth quarter 2019 meetings. As recommended by the Committee, management and the Committee discussed the need to revise the performance metrics to increase emphasis on public safety and wildfire resiliency, and management presented a revised goals framework at the October 2019 meeting. The Committee and management discussed how risk analyses to reduce ignitions associated with SCE infrastructure inform SCE's WMP focus areas, including grid hardening, situational awareness and

operational enhancements. The WMP outlines the activities that, based on risk assessment and measurement tools, effectively reduce risk and the associated work and conformance with this plan is tracked through performance metrics and targets. The Committee discussed the role of the Compensation Committee in determining compensation decisions based on performance and factors including the impact of any catastrophic wildfires on SCE's customers and its service territory. In response to the October discussions, management presented additional updates to the goals and metrics at the December 2019 meeting and these were discussed.

Among other topics, the Committee and management discussed the alignment of the focus on safety and risk management in SCE's proposed revised safety and operational goals with AB 1054 principles. Management also reported to the Committee that SCE had met its safety training goal in 2019, which rolled out cognitive safety training for all employees as well as additional training for leaders. After discussion with management, the Committee agreed that a standing agenda item should be added to provide a summary update to the Committee on various safety and operations metrics so that reporting on traditional operations metrics will be maintained while the focus on particular significant safety and operational issues, such as wildfire, is ongoing. The Committee also recommended that the discussion on operational goals should be continued at the next Committee meeting.

The Committee has meetings scheduled in the first quarter of 2020 on January 31 and February 26.

TIER DESIGNATION

Pursuant to General Order (GO) 96-B, Energy Industry Rule 5.1, this AL is submitted with a Tier 1 designation.

EFFECTIVE DATE

SCE respectfully requests that this AL become effective January 31, 2020, which is the same date as submitted.

NOTICE

Anyone wishing to protest this AL may do so by letter via U.S. Mail, facsimile, or electronically, any of which must be received no later than 20 days after the date of this advice letter. Protests should be submitted to:

CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Avenue
San Francisco, California 94102
E-mail: EDTariffUnit@cpuc.ca.gov

Copies should also be mailed to the attention of the Director, Energy Division, Room 4004 (same address above).

In addition, protests and all other correspondence regarding this AL should also be sent by letter and transmitted via facsimile or electronically to the attention of:

Gary A. Stern, Ph.D.
Managing Director, State Regulatory Operations
Southern California Edison Company
8631 Rush Street
Rosemead, California 91770
Telephone (626) 302-9645
Facsimile: (626) 302-6396
E-mail: AdviceTariffManager@sce.com

Laura Genao
Managing Director, State Regulatory Affairs
c/o Karyn Gansecki
Southern California Edison Company
601 Van Ness Avenue, Suite 2030
San Francisco, California 94102
Facsimile: (415) 929-5544
E-mail: Karyn.Gansecki@sce.com

There are no restrictions on who may submit a protest, but the protest shall set forth specifically the grounds upon which it is based and must be received by the deadline shown above.

In accordance with General Rule 4 of GO 96-B, SCE is serving copies of this AL to the interested parties shown on the attached GO 96-B, R.18-10-007, R.18-12-005, and A.18-09-002 service lists. Address change requests to the GO 96-B service list should be directed by electronic mail to AdviceTariffManager@sce.com or at (626) 302-4039. For changes to all other service lists, please contact the Commission's Process Office at (415) 703-2021 or by electronic mail at Process_Office@cpuc.ca.gov.

Further, in accordance with PUC Section 491, notice to the public is hereby given by submitting and keeping this AL at SCE's corporate headquarters. To view other SCE advice letters submitted with the Commission, log on to SCE's web site at https://www.sce.com/wps/portal/home/regulatory/advice-letters.

For questions, please contact Kavita Srinivasan at (626) 302-3709 or by electronic mail at kavita.srinivasan@sce.com

Southern California Edison Company

/s/ Gary A. Stern, Ph.D.
Gary A. Stern, Ph.D.

GAS:ks:jm
Enclosures



California Public Utilities Commission

ADVICE LETTER SUMMARY

ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.:

Utility type:

☐ ELC ☐ GAS ☐ WATER

☐ PLC ☐ HEAT

Contact Person:
Phone #:
E-mail:
E-mail Disposition Notice to:

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas WATER = Water
PLC = Pipeline HEAT = Heat

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #:

Tier Designation:

Subject of AL:

Keywords (choose from CPUC listing):

AL Type: ☐ Monthly ☐ Quarterly ☐ Annual ☐ One-Time ☐ Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #:

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL:

Summarize differences between the AL and the prior withdrawn or rejected AL:

Confidential treatment requested? ☐ Yes ☐ No

If yes, specification of confidential information:
Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information:

Resolution required? ☐ Yes ☐ No

Requested effective date:

No. of tariff sheets:

Estimated system annual revenue effect (%):

Estimated system average rate effect (%):

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected:

Service affected and changes proposed[1]:

Pending advice letters that revise the same tariff sheets:

[1]Discuss in AL if more space is needed.

Clear Form

Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this submittal, unless otherwise authorized by the Commission, and shall be sent to:

CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102
Email: EDTariffUnit@cpuc.ca.gov

Name:
Title:
Utility Name:
Address:
City:
State: District of Columbia Zip:
Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email:

Name:
Title:
Utility Name:
Address:
City:
State: District of Columbia Zip:
Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email:

Clear Form

ENERGY Advice Letter Keywords

Affiliate	Direct Access	Preliminary Statement
Agreements	Disconnect Service	Procurement
Agriculture	ECAC / Energy Cost Adjustment	Qualifying Facility
Avoided Cost	EOR / Enhanced Oil Recovery	Rebates
Balancing Account	Energy Charge	Refunds
Baseline	Energy Efficiency	Reliability
Bilingual	Establish Service	Re-MAT/Bio-MAT
Billings	Expand Service Area	Revenue Allocation
Bioenergy	Forms	Rule 21
Brokerage Fees	Franchise Fee / User Tax	Rules
CARE	G.O. 131-D	Section 851
CPUC Reimbursement Fee	GRC / General Rate Case	Self Generation
Capacity	Hazardous Waste	Service Area Map
Cogeneration	Increase Rates	Service Outage
Compliance	Interruptible Service	Solar
Conditions of Service	Interutility Transportation	Standby Service
Connection	LIEE / Low-Income Energy Efficiency	Storage
Conservation	LIRA / Low-Income Ratepayer Assistance	Street Lights
Consolidate Tariffs	Late Payment Charge	Surcharges
Contracts	Line Extensions	Tariffs
Core	Memorandum Account	Taxes
Credit	Metered Energy Efficiency	Text Changes
Curtailable Service	Metering	Transformer
Customer Charge	Mobile Home Parks	Transition Cost
Customer Owned Generation	Name Change	Transmission Lines
Decrease Rates	Non-Core	Transportation Electrification
Demand Charge	Non-firm Service Contracts	Transportation Rates
Demand Side Fund	Nuclear	Undergrounding
Demand Side Management	Oil Pipelines	Voltage Discount
Demand Side Response	PBR / Performance Based Ratemaking	Wind Power
Deposits	Portfolio	Withdrawal of Service
Depreciation	Power Lines	

Clear Form

Exhibit A

SCE's 2019 Wildfire Mitigation Plan (WMP) Progress Update – Dec 31, 2019

SCE's 2019 Wildfire Mitigation Plan (WMP) Progress Update

(All data is as of December 31, 2019)

WMP Activities Summary

Complete | Ahead of Plan | On Track | Behind Plan, Likely to Meet Year-end Goal | Behind Plan

Evaluation of HFRA

EVAL-1: Complete evaluation of non-CPUC HFRA for retention or exclusion

PSPS

PSPS-1: De-Energization Notifications

- PSPS-1.1: Notifications to public safety agencies and local gov't
- PSPS-1.2: Notifications to Cal OES via State warning system
- PSPS-1.3: Notifications to the CPUC
- PSPS-1.4: Enhance Emergency Outage Notification System

Operation Practices

- OP-1: Review and update Annual System Operating Bulletin 322
- OP-2: Hire additional staff for Wildfire Infrastructure Protection Team

Risk Analysis

RA-1: Conduct risk analysis based on new expanded scope

Emergency Preparedness

DEP-1: Customer Education and Engagement

- DEP-1.1: Conduct a direct mail campaign for HFRA
- DEP-1.2: Develop local gov't ed. and engagement meeting plan
- DEP-1.3: Execute local gov't ed. and engagement meeting

DEP-2: Emergency Responder Training

- DEP-2.1: Wildfire response training for new or existing responders
- DEP-2.2: Conduct Internal IMT Training around WF response and de-energization protocols

DEP-3: Bolster Incident Mgmt. & Support

- DEP-3.1: Determine positions that need enhanced staffing
- DEP-3.2: Train, exercise, and qualify new staff to meet identified need

System Hardening

- SH-1: Install 96 circuit miles of Covered Conductor
- SH-2: Conduct evaluation of Undergrounding in HFRA
- SH-3: Install at least 1,100 composite poles
- SH-4: Install 7,500 Current Limiting Fuses (CLFs)
- SH-5: Install 50 Remote Controlled Automatic Reclosers (RARs)
- SH-6: Update at least 150 existing RAR Settings
- SH-7: Circuit Breaker Fast Curve
  - SH-7.1: Develop Engineering plan to upgrade Circuit Breaker relays and Settings
  - SH-7.2: Conduct Circuit breaker upgrades and setting updates according to plan

Situational Awareness

- SA-1: Install new additional weather units
- SA-2: Fire Potential Index Phase II. Enhance capabilities of FPI
- SA-3: Install additional HD Cameras
- SA-4: Procure and Install high performance computing cluster weather and fuels modeling system
- SA-5: Develop Asset Reliability & Risk Analytics Capability

Inspections

- IN-1: Distribution Enhanced Overhead Inspections and Remediation in HFRA
  - IN-1.1: Complete visual inspection for all distribution circuits in HFRA
  - IN 1.2: Remediate all conditions that create fire risk under distribution
- IN-2: Transmission Enhanced Overhead Inspections and Remediation in HFRA
  - IN-2.1: Complete visual inspection for all transmission circuits in HFRA
  - IN 2.2: Remediate all conditions that create fire risk under transmission
- IN-3: Perform quality review on transmission and distribution structures
- IN-4: Infrared Inspection of hot spots on overhead distribution facilities and equipment
  - IN-4.1: Inspect 50% of overhead lines in HFRA
  - IN-4.2: Remediate conditions as required based on inspection results
- IN-5: Infrared Inspection, Corona Scanning, and High Definition imagery of overhead transmission facilities and equipment
  - IN-5.1: Complete infrared (IR), corona and HD image scanning of all overhead transmission lines in HFRA
  - IN-5.2: Integrate remediation with EOI activities

Vegetation Management

- VM-1: Hazard Tree Management Program (HTMP)
  - VM-1.1: Perform tree specific threat assessments
  - VM-1.2: Perform risk-based tree removals
- VM-2: Inspect and clear brush around poles
- VM-3: Achieve tree-to-line clearance distance of 12 feet in HFRA
- VM-4: DRI quarterly inspections and removals
  - VM-4.1: Perform all quarterly DRI inspections
  - VM-4.2: Remove trees in accordance with Veg Mgmt program
- VM-5: LiDAR inspections of transmission (220kV and above)
- VM-6.1: Inspect vegetation adjacent to Distribution Circuit Miles
- VM-6.2: Inspect vegetation adjacent to Transmission Circuit Miles

Alternative Technologies

- AT-1: Alternative Technology Pilots
  - AT-1.1: Pilot installation of 50 CAL FIRE-exempt surge arrestor units
  - AT-1.2: Pilot Meter Alarming for Downed Energized Conductor
- AT-2: GSRP Wildfire Mitigation
  - AT-2.1: Evaluate Distribution Fault Anticipation devices
  - AT-2.2: Evaluate Beyond Visual Line of Sight Unmanned Aerial System
- AT-3: Alternative Technology Evaluations
  - AT-3.1: Evaluate Rapid Earth Fault Current Limiters/Arc Suppression Coils
  - AT-3.2: Evaluate alternate fault detection technology
  - AT-3.3: Evaluate fire retardant barrier for wood poles
  - AT-3.4: Evaluate substation-class electronic fuses
  - AT-3.5: Evaluate branch line protection to include single phase reclosing
- AT-4: Alternative Technology Implementation
  - AT-4.1: Develop standard installation practices for aeolian vibration dampers
  - AT-4.2: Develop standard installation practices for ridge pin construction for conductor rebuild
  - AT-4.3: Update distribution overhead requirements for connector selection in HFRA

2019 WMP Activity Status vs Goal

Complete | Ahead of Plan | On Track | Behind Plan, Likely to Meet Year-end Goal | Behind Plan

Operational-Related Activities

Local Gov't and Agency PSPS Notifications

Complete

PSPS – De-Energization Notifications: Public Safety Agencies and Local Government (PSPS-1.1)

Volume vs 2019 Goal: Sent notifications for each of the 16 events to date in 2019

Key Takeaways: Public Safety Partners and local officials are notified of potential PSPS De-energization's 3 days in advance and are provided with more detailed circuit information such as type of customer (critical care, essential service, etc.) and period of concern.

State PSPS Notifications

Complete

PSPS – De-Energization Notifications: Cal OES via State Warning System (PSPS-1.2)

Volume vs 2019 Goal: Sent notifications for each of the 16 events to date in 2019

Key Takeaways: During a PSPS event, SCE conducts daily conference calls with Cal OES and submits daily reports to the State Warning Center regarding circuits in scope and potentially impacted customers.

CPUC PSPS Notifications

Complete

PSPS – De-Energization Notifications: CPUC (PSPS-1.3)

Volume vs 2019 Goal: Sent notifications for each of the 16 events to date in 2019

Key Takeaways: This Activity is triggered by a PSPS event where SCE is required to submit ESRB-8 documentation to confirm it met the requirements outlined by the CPUC.

Emergency Notification Enhancements

Complete

Enhance Emergency Outage Notification System (PSPS-1.4)

Volume vs 2019 Goal: PSPS messaging will be delivered in English plus the five primary additional languages within SCE's service area

Key Takeaways: In Language Solution implemented 11/25/19. PSPS messaging will be delivered in English plus the 5 primary additional languages within SCE Service Territory.

HFRA Boundary Evaluation

Complete

Evaluation of HFRA (EVAL-1)

Volume vs 2019 Goal: Evaluation complete; PFM filed on 8/19/2019

Key Takeaways: The technical review of non-CPUC HFRA evaluation results was completed and the non-CPUC HFRA boundary Petition for Modification (PFM) was filed in August 2019.

Wildfire Risk Analysis

Complete

Expansion of Wildfire Risk Analysis (RA-1)

Volume vs 2019 Goal: To evaluate wildfire risk at a circuit segment level. Conducted a risk analysis incorporating 2018 fire ignition data, additional system information, and consequence modeling

Key Takeaways: SCE has a Wildfire Risk Model to inform granular wildfire risk. The Ignition Module has been enhanced through the incorporation of granular asset characteristics. The Fire Propagation Module leverages data and fire modeling developed by Reax Engineering. The Fire Consequence Module evaluates the consequence of conditional burns based on analysis of population and structure density within each perimeter.

SOB Review and Update

Complete

Review and Update Annual System Operating Bulletin 322 for Non-CPUC HFRA (OP-1)

Volume vs 2019 Goal: Review and update to SOB 322 (operating Procedures regarding the operation of subtransmission and distribution voltage lines traversing high fire areas) complete

Key Takeaways: Revised SOB 322 to include more details on operating restrictions during elevated fire weather threats, blocking transmission reclosers, fast curve settings, operations during PSPS events, lessons-learned from actual PSPS events, and best practices from other utilities.

Hire Additional Meteorologist

Complete

Hire Additional Staff for Wildfire Infrastructure Protection Team (OP-2)

Volume vs 2019 Goal: Hired one additional meteorologist

Key Takeaways: Completed hiring of one additional meteorologist for the Wildfire Infrastructure Protection Team.

2019 WMP Activity Status vs Goal

Complete | Ahead of Plan | On Track | Behind Plan, Likely to Meet Year-end Goal | Behind Plan

Inspection-Related Activities

EOI

Dist.	Trans.
100%	100%
Inspected	
98%	82%
Remediated	

Enhanced Overhead Inspections (IN-1 & IN-2)

Volume vs 2019 Goal:
Distr. 100% of structures inspected/98% of notifications remediated
Trans. 100% of structures inspected/82% of notifications remediated
Key Takeaways: Remediation goals were not achieved in 2019 due to various reasons, pushing past due notifications into 2020. Goal is to ensure all past due notifications are scheduled and remediated by the end of Q1 2020 putting Transmission and Distribution into compliance.

QC HFRA Inspections

228%

Structures Inspected

QC HFRA Inspections (IN-3)

Volume vs 2019 Goal: 17,109 of 7,500 structures inspected
Key Takeaways: The Quality Control group performed field validations of 17,109 EOI inspections completed by Distribution and Transmission work crews as part of the EOI effort. The inspections were performed in the HFRA between December 21, 2018 and August 2, 2019.

Overhead Line Inspections

Complete

Infrared Inspection of Hot Spots on Overhead Distribution Facilities and Equipment (IN-4.1)

Volume vs 2019 Goal: 4,962 of 4,532 miles scanned
Key Takeaways: Distribution IR Scanning program was activated on 6/19 and completed scanning 4,962 circuit miles. The results of the IR scanning produced 81 findings. The project is 100% complete. Completed on 12/17/19.

Overhead Line Inspections

Off Track

Infrared Inspection of Hot Spots on Overhead Distribution Facilities and Equipment: Remediate Conditions (IN-4.2)

Volume vs 2019 Goal: SCE to remediate distribution IR findings based on established remediation timeline criteria.
Key Takeaways: All E1P1 notifications have been either completed or made safe in the field. All E1P2 notifications that were due in 2019 were completed with the exception of one notification that was rescheduled due to weather and subsequently completed on 1/6/20.

Infrared Inspections & HD Imagery

Complete

Infrared Inspection, Corona Scanning, and High Definition Imagery of Overhead Transmission Facilities and Equipment: Complete IR, Corona and HD Image Scanning of All Overhead Transmission Lines in HFRA (IN-5.1)

Volume vs 2019 Goal: 6,788 of 6,788 miles planned of overhead transmission lines have been flown utilizing IR and corona scanning.
Key Takeaways: All flying has been completed for 2019. In total, 6,788 miles were flown. 6,126 miles were flown in Phase 1, between 2/1/19 and 6/28/19. 662 miles were flown in Phase 2, between 10/14/19 and 11/2/19.

Integrate Remediation w/EOI Activities

Complete

Infrared Inspection, Corona Scanning, and High Definition Imagery of Overhead Transmission Facilities and Equipment: Integrate Remediation with EOI Activities (IN-5.2)

Volume vs 2019 Goal: Working to integrate remediation with EOI work.
Key Takeaways: Any Priority 1 conditions or notification items are immediately evaluated and remediated. Priority 2 and 3 notifications will go through internal validation prior to being entered into SAP with a completion date based on HFRA Tier compliance timelines.

2019 WMP Activity Status vs Goal

Complete | Ahead of Plan | On Track | Behind Plan, Likely to Meet Year-end Goal | Behind Plan

System Hardening Activities

WCCP

388%

Circuit Miles Installed

WCCP (SH-1)

Volume vs 2019 Goal: 372 of 96 circuit miles installed
Key Takeaways: Completed installation of 372 circuit miles of covered conductor through December.

Underground Work in HFRA

Complete

Evaluation of Undergrounding in HFRA (SH-2)

Volume vs 2019 Goal: Undergrounding Selection methodology was established, with initial scope selection completed in support of 2021 execution.
Key Takeaways: Developed selection methodology to identify scope for consideration for wildfire undergrounding. Through this process, identified ~45 circuit miles of potential scope for additional feasibility review, in support of 2021 GRC scope amount of six miles.

Composite Poles

129%

Poles Installed

Composite Pole Installation (SH-3)

Volume vs 2019 Goal: 1,421 of 1,100 poles installed
Key Takeaways: Installed 1,421 composite poles through December vs. target of 1,100. Exceeded target of 1,100 composite poles due to acceleration of 2020 scope

Fuses

104%

Fuse Locations Completed

Current Limiting Fuses (SH-4)

Volume vs 2019 Goal: 7,765 of 7,500 fuse locations completed
Key Takeaways: Met target of 7,500 in August.

RARs

110%

RARs Installed

Install 50 Remote Controlled Automatic Reclosers (RARs) (SH-5)

Volume vs 2019 Goal: 55 of 50 RARs installed.
Key Takeaways: Installed and fully commissioned 55 RARs through December. Exceeded target of 50 RARs installed and commissioned through December 2019

RAR Settings

101%

RARs Updated

Update At Least 150 Existing RAR Settings (SH-6)

Volume vs 2019 Goal: 151 of 150 updated RAR settings
Key Takeaways: Met 2019 goal of updating RAR settings.

Circuit Breaker Fast Curve

Complete

Circuit Breaker Fast Curve: Develop Engineering Plan to Upgrade Remaining Circuit Breaker Relays and Update Settings (SH-7.1)

Volume vs 2019 Goal: CB relays and update settings
SH-7.1.A: 60 Substations with 300 circuits scoped
SH-7.1.B: 45 Substations with 68 circuits being scoped
Key Takeaways: All job walks completed, projects scoped and updated into IWP for design/execution.

Circuit Breaker Fast Curve

Complete

Circuit Breaker Fast Curve: Execute Circuit Breaker Relay and Settings Upgrades according to plan (SH-7.2)

Volume vs 2019 Goal: All projects have commenced engineering design, engineering contracts have been issued to the regional engineering vendors who are currently working on the design.
Key Takeaways: There are no overdue projects as of 12/31/19 and therefore the 2019 goal is complete. Construction dates are being scheduled for 2020.

2019 WMP Activity Status vs Goal

Complete | Ahead of Plan | On Track | Behind Plan, Likely to Meet Year-end Goal | Behind Plan

Situational Awareness Activities

Weather Stations

113%

Weather Stations

Weather Stations (SA-1)

Volume vs 2019 Goal: 357 of 315 Weather stations complete
Key Takeaways: Lessons learned from 2019 PSPS events have driven SCE's decision to install more weather stations next year than the 375 originally planned for 2020. Planning is in progress for 2020 installations

FPI Phase 2

Complete

Fire Potential Index Phase 2: Enhance Capabilities of FPI (SA-2)

Volume vs 2019 Goal: Enhanced capabilities of FPI by increasing granularity, adding historical climatology data, and expanding to cover all of SCE's service territory.
Key Takeaways: Fire Potential Index (FPI) Phase 2 consisted of the FPI being calculated at the circuit level across its HFRA below 6,000 feet.

HD Cameras

147%

Cameras Installed

HD Cameras (SA-3)

Volume vs 2019 Goal: 91 of 62 HD cameras installed
Key Takeaways: At conclusion of this initiative in 2020, SCE will have reached 90% coverage of its Tier 2 and Tier 3 HFRA.

HPCC Modeling System

Complete

Procure and Install High Performance Computing Cluster Weather and Fuels Modeling System (SA-4)

Volume vs 2019 Goal: 1 out of 1 HPCCs operational
Key Takeaways: Goal of 1 HPCC installed was completed. Second backup HPCC will be moved from PSSC Labs to the Alhambra Data Center on January 27th.

Analytics

Complete

Develop Asset Reliability & Risk Analytics Capability (SA-5)

Volume vs 2019 Goal: Complete implementation of advanced analytics platform and tools.
Key Takeaways: Completed demo of fire simulation software. High-Performance Computer Cluster is now analyzing historical fire. SCE has developed an Asset Risk Model to prioritize wildfire activities, including the deployment of covered conductor. SCE will continue to enhance and improve the maturity of this model, its ignition modeling, and the ability to reduce risk at the asset level.

2019 WMP Activity Status vs Goal

Complete | Ahead of Plan | On Track | Behind Plan, Likely to Meet Year-end Goal | Behind Plan

Vegetation Management Activities

Enhanced Veg. Mgmt
104%
Trees Assessed

Perform Tree Specific Threat Assessments (VM-1.1)
Volume vs 2019 Goal: 129,485 of 125,000 trees
Key Takeaways: New assessor resources were obtained for Q3-Q4, team met the goal of 125,000 removals by year-end 2019.

Enhanced Veg. Mgmt
79%
Trees Removed

Perform Risk-based Tree Removals (VM-1.2)
Volume vs 2019 Goal: 5,917 of 7,500 trees
Short of plan by 1,583 (21%)
Key Takeaways: Permitting issues resulted in a revised forecast of approximately 4,500 trees to be removed, as communicated in September. While the team did not meet the SB901 goal of 7,500 removals, the team did meet the revised forecast by year-end 2019.

Poles
160%
Poles Cleared

Inspect and Clear Brush Around Poles (VM-2)
Volume vs 2019 Goal: 159,545 of 100,000 poles
Key Takeaways: Contractor continued to add resources throughout the year to complete work on increased pole population. The team met, and exceeded, the goal of 100,000 poles by year-end 2019.

Annual Pruning
Complete

Commence Implementation of Tree-to-line Distance of 12 Feet in HFRA (VM-3)
Volume vs 2019 Goal: N/A (2019 Goal was implementation of the new standard, to be fully implemented within 12 to 18 months)
Key Takeaways: The new standard (12' at time of trim) for distribution voltages piloted in Q1 and Q2 and was implemented across SCE's HFRA in June. Post-implementation, SCE pruned to 12' when feasible, and tree-specific exceptions were evaluated to ensure the regulatory compliance requirement distance(s) were maintained. SCE worked with local governments and hired "notification consultants" to directly interact with customers. The goal to begin implementation of the new pruning distance standard was met by year-end 2019, and the work needed to achieve all applicable trim distances will continue in 2020.

DRI Inspection
13,015
Trees Identified

Perform All Quarterly DRI Inspections (VM-4.1)
Volume vs 2019 Goal:
- Quarterly DRI Inspections on track
- 13,015 trees identified for removal in 2019 YTD

Key Takeaways: Continued historical program for inspections (repeating approximately every 3 months) of areas identified by the CA Tree Mortality Task Force to identify trees that are dead, diseased, or dying.

DRI Removals
97%
% Active Inv. <180 days

DRI Tree Inspections & Removals (VM-4.2)
Volume vs 2019 Goal: >96% of active inventory removed less than 180 days old
- 13,015 trees identified for removal in 2019 YTD
- 13,627 trees removed in 2019 YTD
- Year-end outlook tracking to ~50% of ~30,000 WMP metric forecast

Key Takeaways: Continued historical program for removal of trees identified as dead, diseased, or dying. Easing of drought conditions has reduced the volume of trees requiring removal (30,000 originally forecast based on historical average).

LiDAR
156%
Circuit Miles Inspected

LiDAR Inspections of Transmission (220kV and above) (VM-5)
Volume vs 2019 Goal: 1,559 of 1,000 circuit miles flown
Key Takeaways: The team met, and exceeded, the goal of 1,000 miles by year-end 2019.

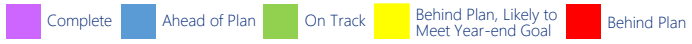
QC HFRA Inspections

Dist.	Trans.
505%	218%

Circuit Miles Inspected

Inspect Vegetation Adjacent to T&D Circuit Miles (VM-6.1 & VM-6.2)
Volume vs 2019 Goal: Inspected vegetation adjacent to 2,271 of 450 distribution circuit miles and 870 of 400 transmission circuit miles
Key Takeaways: Independent QC of annual pruning implemented across territory. Evaluated clearance distance achieved post-pruning. The team met, and exceeded, the goal of 850 total circuit miles by year-end 2019.

2019 WMP Activity Status vs Goal



Alternative Technology Activities

Surge Arrestor Units

100%

Units Installed

Alternative Technology Pilots: Pilot Installation of 50 CAL FIRE-exempt Surge Arrestor Units (AT-1.1)

Volume vs 2019 Goal: 50 Locations of 50 pilot locations installed

Key Takeaways: All pilot units installed in Victorville District.

Meter Alarming

Complete

Alternative Technology Pilots: Pilot Meter Alarming for Downed Energized Conductor (AT-1.2)

Volume vs 2019 Goal: Completed pilot meter alarming for downed energized conductor

Key Takeaways: Pilot is now operational system wide.

Fault Devices

Complete

GSRP Wildfire Mitigation: Evaluate Distribution Fault Anticipation Devices (AT-2.1)

Volume vs 2019 Goal: Exceeded goal of 10 units.

Key Takeaways: 54 of 60 units installed in field. 24 of the 54 installed units fully commissioned. Remaining units will be commissioned/installed Q1/2020.

Unmanned Aerial Systems

Complete

GSRP Wildfire Mitigation: Evaluate Beyond Visual Line of Sight Unmanned Aerial System (AT-2.2)

Volume vs 2019 Goal: Goal Completed; Final Advanced UAS Study report socialized

Key Takeaways: Merge learnings from the Advanced UAS study with successes/lessons learned from the Aerial Inspection program and incorporate into a revised UAS Strategy presentation.

Fault Current Limiters/ Arc Suppression Coils

Complete

Alternative Technology Evaluations: Evaluate Rapid Earth Fault Current Limiters/Arc Suppression Coils (AT-3.1)

Volume vs 2019 Goal: Conduct assessment by end of 2019

Key Takeaways: Assessment completed with a recommendation to proceed with a pilot install.

Fault Detection

Complete

Alternative Technology Evaluations: Evaluate Alternate Fault Detection Technology (AT-3.2)

Volume vs 2019 Goal: Conduct technology assessment by end of 2019

Key Takeaways: Assessment completed with a recommendation to proceed with pilot installs.

Fire Retardant Pole Wraps

Complete

Alternative Technology Evaluations: Evaluate Fire Retardant Barrier for Wood Poles (AT-3.3)

Volume vs 2019 Goal: Evaluate use of wood pole with protective barrier

Key Takeaways: Completed evaluation of new fire-retardant wrap for wood poles as an alternative to fire-resistant composite poles; published associated design standards. Implementing fire-retardant wrap based on positive testing.

Fuses

Complete

Alternative Technology Evaluations: Evaluate Substation-class Electronic Fuses (AT-3.4)

Volume vs 2019 Goal: Conduct technology assessment by end of 2019

Key Takeaways: Engineering evaluation is complete and determined to not move forward with this technology, evaluation work paper completed.

2019 WMP Activity Status vs Goal

Complete | Ahead of Plan | On Track | Behind Plan, Likely to Meet Year-end Goal | Behind Plan

Alternative Technology Activities (Cont.)

Branch Line Protection

Complete

Alternative Technology Evaluations: Evaluate Branch Line Protection to Include Single Phase Reclosing (AT-3.5)

Volume vs 2019 Goal: Complete evaluation

Key Takeaways: Evaluation paper completed. 8 pilot units installed.

Conductor Rebuild Standards

Complete

Alternative Technology Implementation: Develop Standard Installation Practices for Ridge Pin Construction for Conductor Rebuild (AT-4.2)

Volume vs 2019 Goal: Standards published and operational

Key Takeaways: Installation practices updated for inclusion of ridge pin construction in high wind areas and is operational.

Vibration Dampers

Complete

Alternative Technology Implementation: Develop Standard Installation Practices for Aeolian Vibration Dampers (AT-4.1)

Volume vs 2019 Goal: Evaluate need for aeolian vibration dampers publish standards for use. Standards published for use of aeolian dampers with existing conductor.

Key Takeaways: SCE is working with vendors on product evaluation for need and use of aeolian dampers with covered conductor.

Dist. Overhead Requirements

Complete

Alternative Technology Implementation: Update Distribution Overhead Requirements for Connector Selection in HFRA (AT-4.3)

Volume vs 2019 Goal: Design and Construction standards published for connector selection for use in HFRA

Key Takeaways: The connector selection standards updated to require the use of CAL FIRE exempt bolted wedge connectors when working in HFRA.

2019 WMP Activity Status vs Goal

Complete | Ahead of Plan | On Track | Behind Plan, Likely to Meet Year-end Goal | Behind Plan

Emergency Preparedness Activities

Direct Mail Campaign

Complete

Customer Education and Engagement: Conduct a Direct Mail Campaign for HFRA (DEP-1.1)

Volume vs 2019 Goal: Reached approximately 1.5 million customers in HFRA through 2019 direct mailer
Key Takeaways: SCE's Dear Neighbor letter has been sent to all customers in HFRA and in non-HFRA.

Develop Local Meeting Plans

Complete

Customer Education and Engagement: Develop Local Government Education and Engagement Meeting Plan (DEP-1.2)

Volume vs 2019 Goal: Meeting plan developed
Key Takeaways: Local Government Education and Engagement Community Meeting Plan has been developed and is the framework for SCE's execution.

Execute Local Meeting Plans

100%

Cities Engaged

Customer Education and Engagement: Execute Local Government Education and Engagement Meetings According to Plan (DEP-1.3)

Volume vs 2019 Goal: 145 of 145 (100%) community meetings
Key Takeaways: SCE has met with all 145 cities in HFRA as of 12/31/2019.

WF Response Training

Complete

Emergency Responder Training: Wildfire Response Training for New or Existing Responders (DEP-2.1)

Volume vs 2019 Goal: Conducted wildfire response training for new or existing responders
Key Takeaways: Conducted training sessions for initial design of PSPS Incident Management Teams; IMT staffing is being expanded from initial design and trainings will be held as necessary for the remainder of the year.

IMT De-Energization Training

Complete

Emergency Responder Training: Conduct Internal IMT Training Around Wildfire Response and De-energization Protocols (DEP-2.2)

Volume vs 2019 Goal: Conducted internal IMT Training around wildfire response and de-energization protocol
Key Takeaways: Conducted initial training of 175 persons on PSPS Incident Management Teams; Have continued to train additional persons as needed and identified and will continue trainings as needed.

Enhance Staffing

Complete

Bolster Incident Mgmt. & Support: Determine Positions That Need Enhanced Staffing (DEP-3.1)

Volume vs 2019 Goal: Expanded teams to enable additional scalability and additional training sessions will be held for new personnel being added to the teams
Key Takeaways: Stood up dedicated PSPS IMT and Task Force effective June 2019. Provided specialized training and exercises for all PSPS IMT members.

Train New Staff

Complete

Bolster Incident Mgmt. & Support: Train, Exercise, and Qualify New Staff to Meet Identified Need (DEP-3.2)

Volume vs 2019 Goal: Expanded teams to enable additional scalability and additional training sessions will be held for new personnel being added to the teams
Key Takeaways: Stood up dedicated PSPS IMT and Task Force effective June 2019. Provided specialized training and exercises for all PSPS IMT members.

Appendix

Behind Plan Activities Details

2019 WMP Activities - Details (1/4)

Behind Plan Activities

Complete | Ahead of Plan | On Track | Behind Plan, Likely to Meet Year-end Goal | Behind Plan

Status	Current Goal	Narrative
	VM-1.2: Perform risk-based tree removals **5,917 out of 7,500 removals complete (79%)**	**Summary:** Short of 2019 YE Goal by 1,583 (21%). Permitting issues have resulted in a revised forecast of approximately 4,500 trees to be removed, as communicated in September. Exceeded 4,500 revised outlook. **Progress/Challenges:** *Progress:* • Exceeded 2019 tree assessment goal reaching 129,485 total assessments (4,485 above goal) • Increase in assessors/assessments, expedited customer notification process, increased tree crew counts and program staffing ramp up resulted in a >600% increase in the average monthly tree removal in Q4 • Increased December removals to 1,874, which represents continued increases in month-over-month volume *Challenges:* • Impediments included: weather, permitting issues, crew resources and customer authorization • Additional crew resources were limited, based on competing SCE work (including storm), and contract terms for price and duration of contract **Actions to Improve or Sustain Performance:** • 2020 strategy applies lessons learned in 2019 and assigns work in potential accessible geographical locations • Software redesign launching in January 2020 will improve reporting capabilities and ease of use

2019 WMP Activities - Details (2/4)

Behind Plan Activities

Complete | Ahead of Plan | On Track | Behind Plan, Likely to Meet Year-end Goal | Behind Plan

Status	Current Goal	Narrative
	IN 1.2: Remediate all conditions that create fire risk under distribution	**Summary:** All distribution priority 1 (immediate risk of high potential impact to safety or reliability) notifications have been completed. The EOI distribution remediation program is off track due to past-due priority 2 (any other risk of at least moderate potential impact to safety or reliability) notifications. While all 2019 vegetation management work type notifications and most 2019 electrical crew work type notifications have been completed, there are approximately 110 electrical crew work type priority 2 notifications that are past due in 2020 due to weather and resource constraints. SCE is currently planning on remediating these past-due notifications in Q1 2020. **Progress/Challenges:** *Progress:* • In 2019, SCE completed in excess of 49,000 EOI-specific priority 1 and priority 2 distribution-level remediation notifications • All vegetation management EOI notifications have been completed • All electrical crew EOI notifications in 6 of SCE's 8 regions have been completed • In SCE's remaining two regions, North Coast and Rurals, approximately 110 electrical crew priority 2 EOI notifications are past-due in 2020 *Challenges:* • Winter storms and end-of-year resource constraints such as, in some instances, resources that had to be reallocated to emergencies, including PSPS events, negatively impacted year-end completions. • In addition to the past-due notifications, there are over 600 notifications currently subject to a GO 95 exception, primarily due to delays caused by permits and customer issues. GO 95, Rule 18.B(1)(b) permits correction times to be extended under such reasonable circumstances. **Actions to Improve or Sustain Performance:** • The team is working to better align EOI remediation reporting with other programs • The team also plans to regularly generate reports showing new notifications in order to improve work tracking for remediation crews

2019 WMP Activities - Details (3/4)

Behind Plan Activities

Complete | Ahead of Plan | On Track | Behind Plan, Likely to Meet Year-end Goal | Behind Plan

Status	Current Goal	Narrative
	IN 2.2: Remediate all conditions that create fire risk under transmission	**Summary:** All transmission priority 1 (immediate risk of high potential impact to safety or reliability) notifications have been completed. The EOI transmission remediation program is off track due to approximately 320 priority 2 (any other risk of at least moderate potential impact to safety or reliability) notifications that are past-due in 2020, primarily due to weather constraints. Work for these past-due notifications has been scheduled for Q1 2020. **Progress/Challenges:** *Progress:* • All past due notifications have been scheduled for remediation *Challenges:* • Weather restrictions (including rain, wind, and fog) generated helicopter and access restrictions • End-of-year resource constraints due to resources that had to be reallocated to emergencies, including PSPS events, negatively impacted year-end completions • In addition to the past-due notifications, there are approximately 85 notifications currently subject to a GO 95 exception. GO 95, Rule 18.B(1)(b) permits correction times to be extended under reasonable circumstances. • SCE will need to coordinate remediation of past-due 2019 notifications with remediation of 2020 notifications in order to balance resources **Actions to Improve or Sustain Performance:** • New tool will help with updating SAP with notifications completed in the field, increasing data accuracy and resolving close out issues • In order to allow a holistic view of all remediation work (and to assist in balancing resources), the 2020 schedule will be integrated to show both past-due 2019 work and new 2020 work

2019 WMP Activities - Details (4/4)

Behind Plan Activities

Complete | Ahead of Plan | On Track | Behind Plan, Likely to Meet Year-end Goal | Behind Plan

Status	Current Goal	Narrative
	IN 4.2: Infrared Inspection of Hot Spots on Overhead Distribution Facilities and Equipment: Remediate Conditions	**Summary:** SCE to remediate distribution IR findings based on established remediation timeline criteria. All E1P1 notifications have been either completed or made safe in the field. All E1P2 notifications that were due in 2019 were completed with the exception of one notification that was rescheduled due to weather and subsequently was completed on 1/6/2020. **Progress/Challenges:** Distribution IR Scanning has produced a total of 81 findings (23 E1P1s and 58 E1P2s). All E1P1 notifications have been either completed or made safe in the field. All E1P2 notifications without a valid GO95 exception were completed with the exception of one which was rescheduled due to weather. The notification was rescheduled and completed on 1/6/2020. **Actions to Improve or Sustain Performance:** Continuing to monitor results of IR Scanning and producing reporting which will give Regional visibility of all findings.

Exhibit B

Carey Smith Biography

Exhibit B

Carey Smith Biography

Ms. Smith serves as president and chief operating officer of Parsons Corporation, a disruptive technology provider for global defense, intelligence and critical infrastructure markets. She has served as president since November 2019 and as chief operating officer since 2018. From 2016 to 2018, Ms. Smith served as president of Parsons' Federal Solutions business. Before joining Parsons, she served in progressive leadership roles at Honeywell International Inc. from 2011 to 2016, including president of the Defense and Space business unit, vice president of Honeywell Aerospace Customer and Product Support, and president of Honeywell Technology Solutions, Inc. Prior to joining Honeywell, Ms. Smith served in several leadership roles at Lockheed Martin Corporation from 1985 to 2011. She serves on the board of the Professional Services Council and previously served on the board of NN, Inc.

Ms. Smith's relevant safety experience includes her responsibility over global operations at Parsons, and her operational experience in the safety-intensive aerospace and defense industries. As president and chief operational officer at Parsons, Ms. Smith has ultimate management responsibility for the health and safety of Parsons' more than 15,000 employees across 24 countries. Parsons is recognized as a leader in occupational health and safety and was most recently recognized for its ability to integrate its environmental, health and safety systems into its business practices when it was awarded the National Safety Council's Robert W. Campbell award in September 2019. Ms. Smith has been a member of the Safety and Operations Committee since she joined the SCE Board of Directors in October 2019.