

Southern California Edison
2022-WMPs – 2022 Wildfire Mitigation Plan Updates

DATA REQUEST SET O E I S - S C E - 2 2 - 0 0 3

To: Energy Safety
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Response Date: 3/25/2022

Question 11:

Ignition Rates:

a. Table SCE 4-6 shows higher ignition rates for the following sub-cause categories:

- Wire-to-wire contact/contamination - Distribution
- Vandalism/theft – Distribution
- Switch damage or failure – Distribution
- Animal contact - Transmission
- Capacitor bank damage or failure – Transmission
- Lightning arrestor damage or failure – Transmission

For each of the above, provide the following:

- i. A description of any failure mode analysis or fire incident analysis completed, with associated trends.
- ii. Changes made to practices mitigating associated risks, including section(s) within the 2022 WMP Update where changes are addressed, if applicable.

Response to Question 11:

- I. SCE failure engineers investigate all CPUC reportable and other ignition events to determine the cause and understand the system's current state. The engineers perform an initial ignition and failure analysis review, including a review of repair orders, inspection records, outage records related to ignition events, communication with SCE first responders, field visits, and examination of failed equipment. The engineer's findings are reviewed with key stakeholders to confirm the investigation findings and check the event for accuracy. Furthermore, the failure engineers meet weekly with Asset Class engineers to discuss the recent findings to ensure that the ignition data is incorporated into the overall asset strategy for the applicable asset. Lastly, the ignition data is visualized into a dashboard that enables users to examine the data for trends. SCE engineers and other key stakeholders also conduct monthly meetings to discuss recent ignition events and current mitigations. The monthly meetings utilize the dashboard to help facilitate these discussions.
- II. Please note that overall transmission has fewer fires and fewer faults, which may skew the Ignition Rate contained in Table 4-6. While not mentioned in SCE's WMP, SCE does have an energy theft detection algorithm that was developed to proactively identify safety issues resulting from meter bypasses and the model predictions are delivered to the revenue protection for field investigation and mitigation of any found hazards. Changes made to SCE's practices that could mitigate the above risk drivers are:

Sub-cause Categories	Mitigations	2022 WMP Section
Wire-to-wire contact/contamination - Distribution	Covered Conductor	Section: 7.3.3.3.1: Page 294 (SH-1)
	Undergrounding Overhead Conductor	Section: 7.3.3.16.1: Page 334 (SH-2)
	Expulsion Fuse Replacement-Branch Line Protection Strategy	Section 7.3.3.7: Page 308 (SH-4)
	Installation of System Automation Equipment - Remote Controlled Automatic Reclosers Settings Update 313	Section: 7.3.3.9 Page 313 (SH-5)
	Circuit Breaker Relay Hardware for Fast Curve	Section 7.3.3.2: Page 292 (SH-6)
	Long Span Initiative Remediation	Section: 7.3.3.12.1: Page 321 (SH-14)
	Early Fault Detection (EFD)	Section: 7.1.5 Page 243
Vandalism/theft – Distribution	Energy theft detection algorithm	Section 7.3.4 Page 372
Switch damage or failure – Distribution	Distribution Pole Replacement and Reinforcement, Including with Composite Poles	Section: 7.3.3.6: Page 306 (SH-1)
	Undergrounding Overhead Conductor	Section: 7.3.3.16.1: Page 334 (SH-2)
	Expulsion Fuse Replacement-Branch Line Protection Strategy	Section 7.3.3.7: Page 308 (SH-4)
	Installation of System Automation Equipment - Remote Controlled Automatic Reclosers Settings Update 313	Section: 7.3.3.9 Page 313 (SH-5)
	Circuit Breaker Relay Hardware for Fast Curve	Section: 7.3.3.2: Page 292 (SH-6)
	Tree Attachment Remediation	Section: 7.3.3.3.2: Page 301 (SH-10)
	Legacy Facilities	Section: 7.3.3.17.2: Page 340 (SH-11)
	Vertical Switches	Section 7.3.3.17.3: Page 341 (SH-15)

	Distribution HFRI Inspections and Remediations	Section 7.3.9.1 - Page 362 (IN-1.1)
	Infrared inspections of distribution electric lines and equipment	Section 7.3.4.4 - Page 352 (IN-3)
	Pole Brushing	Section 7.3.5.5.2 - Page 404 (VM-2)
	Early Fault Detection (EFD)	Section: 7.1.5 Page 243
Animal contact - Transmission	Transmission HFRI Inspections and Remediations	Section 7.3.4.11.1: (IN-1.2) Page 375
Capacitor bank damage or failure – Transmission	Capacitor Maintenance and Replacement Program	Section 7.3.3.1 Page 290
Lightning arrestor damage or failure – Transmission	Transmission HFRI Inspections and Remediations	Section 7.3.4.11.1: (IN-1.2) Page 375