

*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 SafetyEnergy Safety**

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**Job Title: Advisor**

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**Response Date: 3/25/2022**

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**Question 10:**

Ignition Drivers:

a. Based off Table 7.2 from SCE's 2022 WMP Update, the following ignition drivers saw increases in ignitions for HFTD in 2021:

- Vegetation contacts
- Connection device damage or failure
- Other equipment failure
- Transformer damage or failure
- All other

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 10:**

- 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. The total ignitions that we see year to year will fluctuate and are impacted by multiple factors including, for example, climate change, weather and dry fuels. SCE notes some of the drivers listed have a relatively lower number of events, and one additional event could show an increase, where the change is due to other factors as noted above. Lastly, SCE points out that in 2021 less than 500 total acres burned in connection to SCE facilities.
- II. Changes made to SCE's practices that could mitigate the above risk drivers are:

Sub-cause Categories	Mitigations	2022 WMP Section
Vegetation contacts	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)
	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)
	Distribution HFRI Inspections and Remediations	Section 7.3.9.1 - Page 362 (IN-1.1)
	Hazard Tree Mitigation Program (HTMP)	Section 7.3.5.16.1: Page 425 (VM-1)
	Pole Brushing	Section 7.3.5.5.2 - Page 404 (VM-2)
	Expanded Clearances for Legacy Facilities	Section: 7.3.5.5.3 Page 407 (VM-3)
	Dead and Dying Tree Removal	Section: 7.3.5.16.2 Page 427 (VM-4)
	Rapid Earth Fault Current Limiter (REFCL)	Section: 7.3.3.12.2 (SH-17) Page 323
	Early Fault Detection (EFD)	Section: 7.1.5 Page 243
Connection device damage or failure	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	Section 7.3.3.7: Page 308 (SH-4)

	Line Protection Strategy	
	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)
	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)
	Rapid Earth Fault Current Limiter (REFCL)	Section: 7.3.3.12.2 (SH-17) Page 323
	Early Fault Detection (EFD)	Section: 7.1.5 Page 243
Other equipment failure	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)
	Rapid Earth Fault Current Limiter (REFCL)	Section: 7.3.3.12.2 (SH-17) Page 323
Transformer damage or	Distribution Pole Replacement and Reinforcement, Including with Composite Poles	Section: 7.3.3.6: Page 306 (SH-1)

failure	Undergrounding Overhead Conductor	Section: 7.3.3.16.1: Page 334 (SH-2)
	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)
	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)
	Rapid Earth Fault Current Limiter (REFCL)	Section: 7.3.3.12.2 (SH-17) Page 323
	Early Fault Detection (EFD)	Section: 7.1.5 Page 243
All other	Undergrounding Overhead Conductor	Section: 7.3.3.16.1: Page 334 (SH-2)
	Legacy Facilities	Section: 7.3.3.17.2: Page 340 (SH-11)
	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)
	Rapid Earth Fault Current Limiter (REFCL)	Section: 7.3.3.12.2 (SH-17) Page 323