Southern California Edison
2023-WMPs – 2023-WMPs

DATA REQUEST SET C a l A d v o c a t e s - S C E - 2 0 2 3 W M P - 0 8

To: Cal Advocates
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Received Date: 4/5/2023

Response Date: 4/10/2023

Question 12:
Referring to section 8.1.1.3 Performance Metrics Identified by the Electrical Corporation, Table 8-5, on p.248 of your WMP, SCE states that:
Large variations in weather events, including temperature, rainfall, fuel moisture and wind, can heavily impact performance metrics including outages, wire-down events and ignitions, and can often skew direct comparisons of these metrics year over year. At this time, SCE does not incorporate weather normalization into its WMP ignition forecasts due to the complexity of determining the causal relationship between aberrant weather and ignition probability and fire spread.
Additionally, on p.248 of your WMP, SCE states that:
CPUC Reportable Ignitions in HFRA: In 2022, HFRA ignitions decreased by 20% and 17% since 2020 and 2021, respectively. The decrease is primarily due to a decrease in CFO [contact from object] caused ignitions, which aligns with the mitigations central to SCE's IWMS, namely covered conductor. SCE projects a decline in CPUC reportable ignitions in HFRA over the WMP period.
a) Has SCE conducted a more detailed analysis of the factors contributing to the decrease in HFRA ignitions in 2022? If so, please provide this analysis.
b) Has SCE analyzed the specific impact of covered conductor on the decrease in HFRA ignitions in 2022? If so, please provide this analysis.
c) Has SCE analyzed how factors such as weather and climate change contributed to the decrease in HFRA ignitions in 2022? If so, please provide this analysis.
d) How does SCE differentiate between the effects of covered conductor mitigations and external factors, such as weather or climate change, on the reduction in CPUC reportable ignitions?
e) Please provide all available data or analysis on the relationship between covered conductor mitigations and Fire Incident Preliminary Analysis (FIPA) ignitions.
f) Have similar reductions been observed for FIPA ignitions from 2020 to 2022?
g) If the answer to the previous part is yes, are the same causal factors responsible for these reductions?
h) Are there any specific examples or case studies that SCE can provide to illustrate the direct impact of covered conductor on reducing CPUC reportable ignitions, while accounting for external factors such as weather and climate change?
i) How does SCE plan to continue monitoring and evaluating the effectiveness of covered conductor in reducing CPUC reportable ignitions and FIPA ignitions in the future?

Response to Question 12:

a) *Has SCE conducted a more detailed analysis of the factors contributing to the decrease in HFRA ignitions in 2022? If so, please provide this analysis.*

SCE has not conducted a more detailed analysis of the factors contributing to the decrease in HFRA ignitions in 2022. However, please see SCE's response to its 2022 WMP Area for Continuous Improvement SCE-22-06 in Appendix F of SCE's 2023-2025 WMP, for additional information on ignition trends over time.

b) *Has SCE analyzed the specific impact of covered conductor on the decrease in HFRA ignitions in 2022? If so, please provide this analysis.*

SCE has not analyzed the specific impact of covered conductor on the decrease in HFRA ignitions in 2022. However, SCE refers to the following statement on page 3 of the WMP: "Further, there have not been any fires associated with covered conductor caused by risk drivers that covered conductor was designed to directly address."

c) *Has SCE analyzed how factors such as weather and climate change contributed to the decrease in HFRA ignitions in 2022? If so, please provide this analysis.*

SCE has not analyzed how factors such as weather and climate change contributed to the decrease in HFRA ignitions in 2022. SCE does not incorporate weather or weather and climate change normalization into its analysis due to the complexity of determining the causal relationship between aberrant weather and ignition probability and fire spread. It can also be challenging to normalize year-over-year comparisons and thus compare years on a fully equivalent basis.

d) *How does SCE differentiate between the effects of covered conductor mitigations and external factors, such as weather or climate change, on the reduction in CPUC reportable ignitions?*

SCE can quantify the impact of covered conductor in reducing risk events such as outages, ignitions and wire downs. However, SCE does not incorporate weather or weather and climate change normalization into its analysis due to the complexity of determining the causal relationship between aberrant weather and ignition probability and fire spread. Please also see the response to part c) above.

e) *Please provide all available data or analysis on the relationship between covered conductor mitigations and Fire Incident Preliminary Analysis (FIPA) ignitions.*

SCE has not performed analysis on the relationship between covered conductor mitigations

and Fire Incident Preliminary Analysis (FIPA) ignitions. Please also see the response above to part b).

f) Have similar reductions been observed for FIPA ignitions from 2020 to 2022?

In April 2019, SCE launched the FIPA process to perform more in-depth investigations into all ignitions that occur in connection with SCE.[1] The FIPA process has been continuously improving since inception to enhance efficiency of the investigation process related to ignitions and other data pertaining to near-miss events, such as wire downs and underground equipment failures.

SCE expanded the process for its Fire Investigation team to now review all repair orders as of March of 2022 and to avoid missing those for which the key words were not present. In this review, engineers evaluate the description of the event that occurred by viewing pictures taken by responders and gathering other geographic and equipment related information. If further information needs to be collected to assess if an ignition took place, the engineers seek clarification on the event and details pertaining to the ignition.

Because of the continuous improvements that SCE made to its FIPA processes, more non-CPUC reportable events were identified through this process. As a result, the FIPA event counts over the recent years may not be directly comparable to each other.

g) If the answer to the previous part is yes, are the same causal factors responsible for these reductions?

N/A

[1] FIPA investigations do not include ignitions which are under investigation by the SCE Law Department.

h) Are there any specific examples or case studies that SCE can provide to illustrate the direct impact of covered conductor on reducing CPUC reportable ignitions, while accounting for external factors such as weather and climate change?

Please see the two examples below on covered conductor on reducing potential CPUC reportable ignitions. More case studies can be found in Joint IOU Covered Conductor Working Group Report in SCE's 2023-2025 WMP Appendix F7.[2]

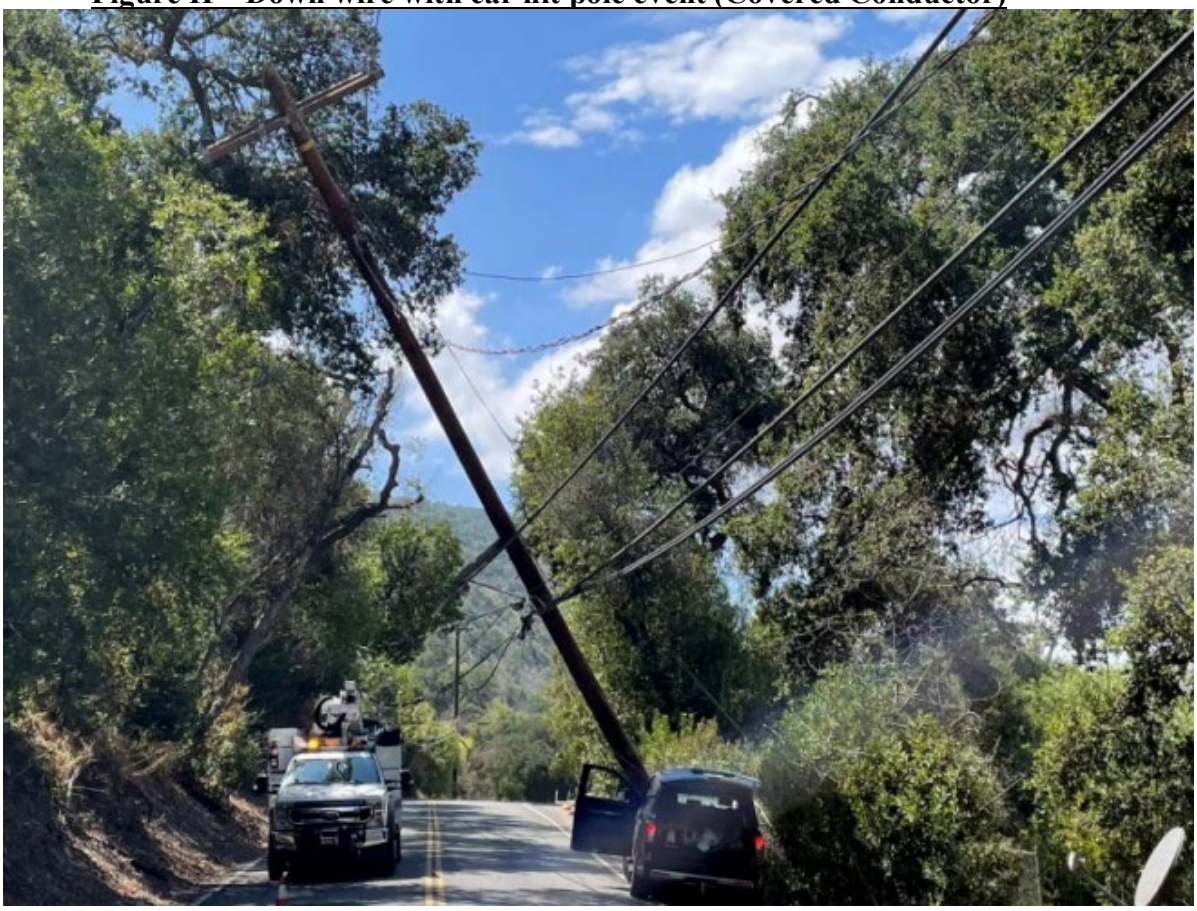
1) In an SCE repair order dated 2/22/2023, during a storm, a tree failed and fell into covered conductor. The tree was found lying across covered conductors and did not result in an ignition. Furthermore, no outage resulted due to the contact. Figure I below shows the event and the potential of for an outage and ignition had covered conductor had not been installed.

Figure I – Tree fell into lines (Covered Conductor)

[2] Please see SCE's 2022 WMP Supplemental Information Appendix F (F7: Joint IOU Covered Conductor Working Report), which can be found on pp. 879-932 of SCE's 2023 - 2025 WMP.

2) In an SCE repair order dated 9/11/2022, Per SCE repair order, a vehicle struck the pole resulting in the pole breaking and the covered conductor coming down. In this situation, bare conductor could have resulted in an ignition. Figure II below illustrates the ignition potential if covered conductor was not installed.

Figure II – Down wire with car hit pole event (Covered Conductor)



i) *How does SCE plan to continue monitoring and evaluating the effectiveness of covered conductor in reducing CPUC reportable ignitions and FIPA ignitions in the future?*

SCE continues to monitor and evaluate the effectiveness of its covered conductor program. SCE's FIPA processes captures the cause of the events as well as the conductor attributes (wire sizes, covered conductor or bare conductor) when events happen. SCE also uses dashboard tracking for its covered conductor installations and the corresponding risk events (e.g. outages, ignitions and wire downs) at circuit level. The data collected through those processes allows SCE to perform analysis and evaluation of the effectiveness of covered conductor in reducing CPUC reportable ignitions and FIPA ignitions.