Southern California Edison
R.18-10-007 – SB 901

DATA REQUEST SET S E D - S C E - 0 0 4

To: SED
Prepared by: Raymond Fugere
Job Title: Senior Manager
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Response Date: 3/12/2019

Question 01 a-c: 1. CALPA-SCE-002 Q.04
RE Question 4: Question 4 On page 45, Chapter 4.2.3.3 Distribution Infrared Inspection Program: SCE provided a response in Excel spreadsheet and included a corresponding narrative as follows:

> SCE's Response to Question 4:
> a. SCE inspected 307 HFRA circuits in the 2017 IR pilot and 1,079 HFRA circuits in 2018 for a total of 1,386 HFRA circuits.
> b. IR inspections, during the 2017-2018 time period, detected anomalies on 37 circuits in the 2017 IR pilot and on 84 circuits in 2018 for a total of 121 anomalies.

A. Staff understands that the IR will be done on a biennial cycle. Assuming that SCE repairs or replaces the faulty material, does SCE plan to analyze the faults found by specific GIS location to determine whether issues recur by location, which may indicate a deteriorating segment or entire conductor? How will SCE use the location of issues found?

B. Based on its historical experience with inspections as well as these newer IR inspections, given that these issues will be repaired each year, how many circuit issues does SCE expect to find each IR inspection cycle? Does SCE expect there to be an overall decline in circuit issues found in each subsequent inspection? If so, what is the expected discrepancy detection rate, given that for the 2017-2018 IR cycle the rate was 8.7% (or 0.087 issues detected per circuit mile)?

C. What does SCE do to use the fault data and issue data?

Response to Question 01 a-c:

A. SCE interprets "faults found" and "faulty material" found to mean IR detected "Hot Spots" or anomalies. Infrared Inspections may detect hot spots on conductors or other electrical components that could result in a wire down. As SCE has completed one cycle of inspections, it will need to have at least one or more series of inspections to be able to determine the best use of the data. However, SCE may use the data to help make decisions and changes to its existing Maintenance and Inspection programs such as:
   - Conductor/Equipment Installation Areas
   - Overhead Detail Inspections
   - Remediation Timeframes of Certain Equipment
   - Overhead Conductor Replacement Program

B. Given that SCE has only completed one cycle of inspections, it does not know how many anomalies will be detected during the second inspection cycle. Additionally, given the many

factors that could influence the volume of anomalies that might develop in a given period of time, SCE does not know at this time if the overall detection rate will decrease.

C. As stated in response to part A above, given the relatively new nature of SCE's Infrared Inspection Program, SCE cannot precisely say how it will use the data moving forward from its IR program. However, SCE may utilize this data to help make decisions and changes to its existing Maintenance and Inspection programs such as:
    - Conductor/Equipment Installation Areas
    - Overhead Detail Inspections
    - Remediation Timeframes of Certain Equipment
    - Overhead Conductor Replacement Program

Lastly, as more data is collected from the IR program, how the information will be used may change and develop over time.