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

DATA REQUEST SET S E D - S C E - 0 0 1

To: SED
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Response Date: 3/4/2019

Question 13: 13. Provide an overview of the LiDAR Inspection Program including how many LiDAR inspections are occurring each year, which areas in SCE territory are best suited for use of LiDAR, what guidelines are used to determine findings from the LiDAR inspection, what are the remediations for those findings, and how are issues prioritized including turn-around time for addressing finds from LiDAR inspections. Please explain whether this is part of the Enhance Inspection Procedures.

Response to Question 13:
SCE utilizes LiDAR, or light detection and ranging, technology to inspect select transmission and sub-transmission lines, particularly in rugged and hard-to-access areas, with respect to FAC 003-4, GO 95-Rule 35 and Public Resources Code (PRC) section 4293 to maintain appropriate clearances between SCE's lines and vegetation. LiDAR is a surveying method that measures distance to a target by illuminating the target with pulsed laser light and measuring the reflected pulses with a sensor. Differences in laser return times can then be used to make digital three-dimensional representations of the target. LiDAR is an efficient and effective method to assess vegetation clearances, a key component of SCE's wildfire prevention and mitigation plan.

In 2018, SCE performed LiDAR acquisitions on approximately 775 miles of 220 kV and 500 kV transmission corridors. In 2019, SCE has performed a LiDAR acquisition on approximately 330 miles as of 2/28/2019 and intends to perform acquisitions on the majority of the bulk electric system. In 2019, SCE has committed to conduct LiDAR acquisitions of approximately 1,000 conductor miles in HFRA to identify potential vegetation compliance clearance issues and to support Hazard Tree Risk Assessment. The vegetation management department will methodically perform LiDAR acquisitions based on ROW accessibility, conductor to ground clearance issues, and the plant community/ecosystem the ROW corridor traverses.

When SCE receives the raw LiDAR data and processes summary data, the data is analyzed and evaluated for immediate compliance risk (as-surveyed data) and potential compliance and reliability risks (vegetation within grow-in or fall-in distance under modeled maximum sag and maximum sway data). This data is taken into the field using GIS-software and inspected by a qualified utility arborist. Trees that are an immediate compliance risk or potential compliance risk are inspected off-cycle to ensure SCE remains in compliance with FAC-003-4 and will not violate the MVCD. The rest of the LiDAR data is inspected on the routine inspection cycle.

When qualified utility arborists inspect the trees corresponding with the LiDAR data, they evaluate

the potential risk of trees interacting with SCE facilities in the next 18 months and prescribes mitigation or monitoring as necessary. These LiDAR-based ground inspections allow the qualified utility arborist to evaluate the species, individual tree characteristics, and localized environmental conditions which could raise or lower the priority in which the tree identified in the LiDAR data needs to be mitigated or monitored. Based on the field assessment, contract or internal qualified utility arborists determine whether a tree requires mitigation work in the current annual cycle.

Vegetation that presents an immediate compliance risk is inspected as soon as possible and mitigated in accordance with company priority requirements. Vegetation that presents a potential compliance risk is prioritized for inspection and the corresponding mitigation tree work is prioritized as well. Tree work associated with future risk and long-term risk is performed on an annual schedule based on the current cycle. Tree work related to Hazard Tree Mitigation is risk-ranked and prioritized by level of risk.