Southern California Edison

WSD-011 – Resolution implementing the requirements of Public Utilities Code Sections 8389(d)(1), (2) and (4) related to catastrophic wildfire caused by electrical corporations subject to the Commission's regulatory authority

DATA REQUEST SET M G R A - S C E - 0 0 6

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Response Date: 3/9/2021

Question 007:
In its response to Cal Advocates Data Request CalAdvocates-SCE-2021WMP-01, SCE states that "SCE plans to assess the feasibility of replacing the current methodology for setting PSPS thresholds and triggers with a dynamic, machine-learning model that derives circuit thresholds and triggers. SCE began the development of this model in 2020 and will perform rigorous analysis and validation in 2021." How does this machine learning model differ from POI? What algorithms will it use and what specific data will it analyze (in particular weather data)?

Response to Question 007:

The POI model is the same as the machine learning model which creates probability of ignitions at the FLOC level. Results of the POI model are used as inputs to the dynamic PSPS threshold and trigger model (PSPS model).

The PSPS model uses historical wind speeds and wind-driven outages data to enhance the POI model predictions such that the POI changes as the impacts from wind/gust speeds changes. Unlike the POI model, the PSPS model uses an algorithm that results in outputs that are dynamic, changing with wind/gust speeds. The PSPS model also leverages FPI data and engineering design capacity to set the risk-informed PSPS threshold and trigger for each HFRA circuit.

In addition to POI model results, data used in the dynamic PSPS model include ADS (Atmosphere Data Solutions) hourly historical wind/gust speeds at a 2 km horizontal resolution, SCE historical outages, historical FPI, and SCE circuit connectivity.

Currently the feasibility of this method is still being evaluated. SCE plans to make enhancements to the PSPS model and perform rigorous analysis and validation in 2021.