

Southern California Edison
***WSD-001 – Resolution WSD-001 to Establish Procedures for the Wildfire Safety Division's
Review of 2020 Wildfire Mitigation Plans Pursuant to PUC Sections 8386 and 8386.3***

DATA REQUEST SET W S D - S C E - 0 0 2

To: WSD
Prepared by: Jose Ramon Goizueta
Job Title: Director Advanced Analytics
Received Date: 3/5/2020

Response Date: 3/10/2020

Question 050 (SCE-43895-D-442):

A. Item Index [For CPUC tracking purposes. Please reference this item index with the response provided.]

SCE-43895-D-442

B. Request Type

Request for additional specificity or clarification regarding information submitted in WMP or maturity survey

C. Relevant section of WMP (if applicable)

5.3.2 Situation Awareness and Forecasting

D. Relevant question in Maturity Survey (if applicable)

NA

E. Relevant meeting or call (if applicable)

NA

F. Specific Data request

Provide detailed written documentation of each decision support index, scale, or tool used for determining fire and weather prediction as they relate to actions such as PSPS, fire safe work restrictions, assessing system hardening and vegetation treatment priority areas, ignition potential and community impact, incident response, and any other related actions. Submit descriptions and definitions of adjectives or output information of each index or scale. Provide the specific elements for each of the “decision support indices”, why those elements were chosen, historical vetting of those elements (back casting methodology), weighting of those elements, resultant scale with adjectives, and any other algorithmic related items. Provide all data models used to verify that the indices are responding to either operational (i.e., voltage irregularities, equipment failure, fires, etc.,) or environmental signals (winds, dryness, etc.,).

Response to Question 050 (SCE-43895-D-442):

SCE interprets this question as a request for detailed information on the four key metrics supporting wildfire decision making: FPI, Windspeed, Probability of Ignition, and Consequence (REAX). The table below attempts to capture related elements in the request, and files have been attached describing the methodologies behind three of the four metrics. Windspeed data is provided by our vendor ADS and a whitepaper on their methodology cannot be provided by this DR’s deadline.

Decision Support Index	Description	Scale	Influences	Fire Prediction	Weather Prediction	Considers Community Impact	Why Chosen	Analytic Method	Testing Method	Detailed Documentation
FPI	The SCE Fire Potential Index (FPI), a tool that utilizes weather data, fuel conditions, and vegetation moisture content to rate the daily fire potential across our region.	0 - 17	Work Restrictions, PSPS	Yes	No	No	Best available measure	Algebraic using empirical weather and environmental data	Calibration planned for June 2020	Explanation paper attached
Windspeed	historical sustained and gust windspeeds across SCE territory.	0 to 80MPH+	PSPS, System Hardening, Inspections	Yes	Yes	No	Clear relationship between large fires and windspeed	Complex wind forecast models	Vendor Method	Vendor Methodology Not Available
Probability of Ignition	The probability of an ignition caused by an SCE asset	0 to 1	System Hardening, Inspections	Yes	No	No	To enable prioritization of system mitigations	Machine Learning	Model tested against historical data	Paper on general method attached (not wildfire specific)
Fire Consequence	REAX	0 to 100,000+	PSPS, System Hardening, Veg Management	No	No	Yes	Best available information on fire consequence	Monte Carlo Simulation	Model tested against historical data	Vendor provided paper attached