

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 3

To: WSD
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Received Date: 3/13/2020

Response Date: 3/18/2020

Question 019- SCE-43895-Y-273:

A. Item Index

SCE-43895-Y-273

C. Relevant section of WMP (if applicable)

6.4: Current baseline state of service territory and utility equipment

D. Relevant question in Maturity Survey (if applicable)

NA

E. Relevant meeting or call (if applicable)

From WMP: Summarized risk map: Operation wildfire risk reduction model used to prioritize long-term hardening efforts. Referred to on page 48, section 5.3.1.1. From the section:

“SDG&E leveraged 30 years of high-resolution weather data to establish a cli

F. Specific Data request

Provide the most recent map of overhead distribution, transmission, and substation facilities (as was provided earlier) in entire utility region with additional fields for...

1. Ignition probability – projected likelihood of target asset causing an ignition in the next year (0.0 – 1.0)

2. Failure probability – projected likelihood of target asset failing in the next year (0.0 – 1.0)

3. Wildfire spread and consequence score (normalized from 0.0 – 1.0) – relative ability ignition spread and quantity of homes or timber affected if ignition occurs

4. Prioritization ranking of assets for maintenance – calculated ranking of assets for prioritizing asset maintenance, upgrades, and equipment replacement. This is a percentile ranking with 99th percentile being highest priority and 0th percentile being lowest priority for asset maintenance

5. Any remaining data for circuit risk levels (including vegetation risk index data) for all transmission lines and distribution lines

G. Format in which the data is to be provided

GIS File

Response to Question 019- SCE-43895-Y-273:

CONFIDENTIAL

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D. 16-08-024 and D. 17-09-023. Basis for Confidentiality In Accompanying Confidentiality
Declaration. Public Disclosure Restricted

prioritization purposes when needed. SCE uses the Wildfire Risk Model (WRM) for prioritizing specific mitigation activities such as enhanced inspections and bare wire replacement with covered conductors. This model is only currently calculating asset fire risks for distribution equipment; therefore, transmission and substation cannot be provided at this time. Additionally, because this model calculates fire risk specifically, it only includes assets in HFRA. To satisfy this data request to the best of our current ability, we are providing a map file that contains the following:

- FLOC – The FLOC is the functional location number. For distribution, this is a pole and is what allows us to calculate risk at a specific location on the grid. Although risk calculations are asset specific, risks have been aggregated to the FLOC because some assets in our system have specific equipment numbers such as transformers while others do not such as conductor. Therefore, a total risk for the FLOC will include the risks of any equipment attached to the FLOC such as conductors, transformers, switches, etc.
- REAX – As discussed in the WMP, this is how we quantify consequence when calculating risk as probability multiplied by consequence. As requested, we have included the actual REAX score at each FLOC as well as the normalized score. Please note that we are unable to decompose the REAX score into the quantity of homes or timber at the FLOC level.
- Probabilities – Our probabilities are calculated using machine learning models based on historical faults at the FLOC location. Please note that these probabilities are used for prioritizing mitigations not for predicting the number of fires in the future. This is because the probability of a fire (probability of spark multiplied by the probability of a spark turning into a fire) occurring is highly dependent on future environmental and weather conditions. However, we do calculate the risk reduction as we complete mitigations and can monitor declines in system risk and expect similar declines in fires under similar weather and environmental conditions. We have included the FLOC level probabilities for all models currently in production:
 - EFF – Conductor (includes connectors, crossarms, and fuses), Transformer, Capacitor, and 3 types of Switches.
 - CFO - Animal Contact, Balloon Contact, Vegetation Contact, Vehicle Contact, Other (not of one of the previous types), unknown
 - We also provided the sum of the probabilities
- Total Risk – This is the sum of the probabilities at each FLOC times the REAX at that FLOC
- Total Probability Percentile – The total probability at each FLOC has been transformed into percentile as requested.
- Total Risk Score Percentile - The total risk at each FLOC has been transformed into percentile as requested.

Please note that the data provided is an export as of March 2020. The WRM is updated and refined frequently as new and better data becomes available. Additionally, there are identified gaps in our data systems, therefore scoping decisions based on model outputs such as where to install covered conductor are reviewed by subject matter experts before construction.