

Southern California Edison
2023-WMPs – 2023-WMPs

DATA REQUEST SET O E I S - P - W M P - 2 0 2 3 - S C E - 0 0 2

To: Energy Safety
Prepared by: Lisa Mau
Job Title: Senior Advisor
Received Date: 5/8/2023

Response Date: 5/11/2023

Question 07:

"Regarding Appendix B Items That Are Currently Optional Or “By Request” Only
Provide the following, which are outlined in the 2023-2025 Wildfire Mitigation Plan Technical Guidelines, Appendix B. If the data is tabular (formulas, tables, graphs, charts) provide it in MS Excel. If the data is text-heavy, provide the information in MS Word or PDF for larger text-heavy files.

- a. Detailed Model Documentation for each model and sub-model discussed in SCE’s response to Section 6.1.2 Summary of Risk Models; all 17 models outlined in Table 6-1.
 - i. Technical documentation should be presented according to ASTM E 1472 – Standard Guide for Documenting Computer Software for Fire Models.
 - ii. Include a list of assumptions and known model limitations according to ASTM E 1895 – Standard Guide for Determining Uses and Limitations of Deterministic Fire Models.
 - iii. Present verification and validation documentation according to the SFPE’s Guidelines for Substantiating a Fire Model for a Given Application or ASTM E 1355 – Standard Guide for Evaluating the Predicting Capability of Deterministic Fire Models.

At a minimum, the documentation must include¹:

- (1) Purpose of the model/problem identification,
- (2) Model version,
- (3) Theoretical foundation,
- (4) Mathematical foundation,
- (5) External dependencies,
- (6) Model substantiation, and
- (7) Sensitivity

(a) Model Substantiation²:

(b) For each model, provide documentation of the following model substantiation studies:

- (i) Validation data,
- (ii) Model verification,
- (iii) Model validation, and
- (iv) Model calibration

b. Additional Models Supporting Risk Calculation³:

i. For each additional model that supports the risk calculations, provide weather analysis and fuel conditions.

c. Calculation of Risk and Risk Components: Likelihood⁴

i. More detailed information on:

- (1) Ignition Likelihood,
- (2) Equipment Likelihood of Ignition,
- (3) Contact from Vegetation Likelihood of Ignition,

- (4) Contact from Object Likelihood of Ignition,
- (5) Burn Probability, and
- (6) PSPS Likelihood
- d. Calculation of Risk and Risk Components: Consequence⁵
 - i. More detailed information on:
 - (1) Wildfire Consequence,
 - (2) Wildfire Hazard Intensity,
 - (3) Wildfire Exposure Potential, and
 - (4) Wildfire Vulnerability
- e. Calculation of Risk and Risk Components: PSPS Consequence⁶
 - i. More detailed information on:
 - (1) PSPS Exposure Potential, and
 - (2) Community Vulnerability to PSPS
- f. Calculation of Risk and Risk Components: Risk⁷
 - i. More detailed information on:
 - (1) Ignition Risk,
 - (2) PSPS Risk, and
 - (3) Overall Utility Risk"

Response to Question 07:

SCE populated Table 6-1 based on the structure and example provided by OEIS in the final WMP guidelines. SCE understood the intention of the table was to “summarize the calculation approach for each risk and risk component identified in Section 6.2.1” (see WMP Final Technical Guidelines, page 31). As such, SCE populated the table with one row for each of the 17 risk components, which were defined by OEIS in Section 6.2.1 of the guidelines.

SCE wishes to clarify that of the 17 risk components that SCE provided in Table 6-1, SCE only considers its Probability of Ignition (POI) model (IRC1) and Technosylva Wildfire Consequence (IRC3) as true risk models.

Please see Section 6.2.2 and Appendix B for additional information on each risk component, except for the five components that SCE does not calculate directly or are addressed through other risk components (i.e., Wildfire Likelihood, Burn Probability, Wildfire Hazard Intensity, Wildfire Exposure Potential, and PSPS Exposure Potential).

As discussed in SCE’s response to OEIS - P - WMP_2023 - SCE – 001, Question 1, the attached file, “Supplemental Appendix B,” provides SCE’s Appendix B Items that are currently optional or “by request” only.

At a minimum, the documentation must include:

- (1) Purpose of the model/problem identification,*
- (2) Model version,*
- (3) Theoretical foundation,*

- (4) Mathematical foundation,*
- (5) External dependencies,*
- (6) Model substantiation, and*
- (7) Sensitivity*

SCE's discussion of the (1) Purpose of the model/problem identification, (2) Model version, (3) Theoretical foundation, (4) Mathematical foundation, (5) External dependencies, (6) Model substantiation, and (7) Sensitivity begins on page 5 of the file, "Supplemental Appendix B.pdf".

a. Model Substantiation:

i. For each model, provide documentation of the following model substantiation studies:

- (1) Validation data,*
- (2) Model verification,*
- (3) Model validation, and*
- (4) Model calibration*

SCE's discussion of the model substantiation begins on page 34 of the file titled "Supplemental Appendix B.pdf"

b. Additional Models Supporting Risk Calculation:

i. For each additional model that supports the risk calculations, provide weather analysis and fuel conditions.

SCE's discussion of each additional model that supports the risk calculations, provide weather analysis and fuel conditions begins on page 41 of the file titled "Supplemental Appendix B.pdf".

c. Calculation of Risk and Risk Components: Likelihood⁴

i. More detailed information on:

- (1) Ignition Likelihood,*
- (2) Equipment Likelihood of Ignition,*
- (3) Contact from Vegetation Likelihood of Ignition,*
- (4) Contact from Object Likelihood of Ignition,*
- (5) Burn Probability, and*

d. Calculation of Risk and Risk Components: Consequence

i. More detailed information on:

- (1) Wildfire Consequence,*

- (2) Wildfire Hazard Intensity,*
- (3) Wildfire Exposure Potential, and*
- (4) Wildfire Vulnerability*
- e. Calculation of Risk and Risk Components: PSPS Consequence⁶*
 - i. More detailed information on:*
 - (1) PSPS Exposure*
 - (2) Community Vulnerability to PSPS*
- f. Calculation of Risk and Risk Components: Risk⁷*
 - i. More detailed information on:*
 - (1) Ignition Risk,*
 - (2) PSPS Risk, and*
 - (3) Overall Utility Risk*

SCE's discussion of the Calculation of Risk and Risk Components (c-f) begins on page 44 of the file titled "Supplemental Appendix B.pdf"

SCE would welcome further clarification or discussion with Energy Safety if the information it is seeking is not contained within these references.