

**PACIFIC GAS AND ELECTRIC COMPANY**  
**Wildfire Mitigation Plans Discovery 2023**  
**Data Response**

PG&E Data Request No.:	TURN_007-Q002		
PG&E File Name:	WMP-Discovery2023_DR_TURN_007-Q002		
Request Date:	April 21, 2023	Requester DR No.:	TURN-PG&E- 7
Date Sent:	April 26, 2023	Requesting Party:	The Utility Reform Network
DRU Index #:		Requester:	Tom Long

**SUBJECT: SYSTEM HARDENING**

**QUESTION 002**

Regarding Table 7-2 in the WMP:

- a. TURN understands from Table 6-5 that the Overall Risk Score values in Table 7-2 are the sum of Total Ignition Risk Score and the Total PSPS Risk Score. Please explain how these input values to the Overall Risk Score column were calculated. Please include in the explanation the relevant mathematical equation(s).
- b. If not explained in response to “a”, please explain how the Overall Risk Score relates to the Wildfire Mean Risk Score.
- c. Please provide, in live Excel format, a table that shows the information in Table 7-2 for all HFTD circuit segments. If PG&E has the same information for its self-identified HFRA circuit segments, please include that information also, and indicate which circuit segments are HFRA.

**ANSWER 002**

- a. The Overall Risk Score is calculated by the calibration of the Wildfire Risk and PSPS Risk scores to the overall Enterprise Risk Model in the form of Multi-Attribute Value Function (MAVF) units. This is shown in Section 7.2.2.2:

***Overall Utility Risk*** = *Wildfire Risk (Dx, Tx, Sub)* + *PSPS Risk (Backcast, PIC)*

***Enterprise Risk(MAVF)*** = (23,082 *Dx* + 772 *Tx* + 14 *Sub*) + (2170) = 26,038

Each individual risk model that included further granularity at the structure or circuit segment level was calibrated to the overall enterprise risk MAVF scores.

For example, in Table 7.2.2-4, PG&E shows an example calculation of the workplan location risk scores based on the Wildfire Distribution Risk Model (WDRM) that includes a WDRM to Enterprise MAVF Calibration of 23,082 / 2,022 = 11.41. The workplan locations and its associated risk reduction is re-calibrated by 11.41 to arrival at comparable enterprise level scores used for the Overall Risk Score.

- b. As stated in Section 6.4.2, We consider circuit segment ranking by high to low mean\_risk. By sorting in this method, the risk of the circuit segment is indifferent to the length of the circuit segment. However, the length of the circuit segment based

on the mean\_risk affects the total risk. In order to calculate Total Ignition Risk Score to arrive at Overall Risk Score, the mean risk is multiplied by the risk pixels it crosses, to arrive at total\_risk from WDRM. This total\_risk score is then multiplied by 11.41 to convert the WDRM v3 risk scores to the enterprise wildfire risk score as it relates to distribution.

- c. Please see attachment *WMP-Discovery2023\_DR\_TURN\_007-Q002Atch1.xlsb*. Two additional columns N:O were added to this 'TopRisk\_Table' tab and the rows were extended to capture applicable circuit segments. Table 7-2 contents can be seen in Column EN:EQ. Please note, line items outside of the top 5% risk circuit segments do not have same level of detailed review given the amount of time to respond to this request.