

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

PG&E Data Request No.:	CalAdvocates_009-Q004		
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Risk Methodology and Assessment

QUESTION 004

P. 174 of PG&E's WMP states, "The results of the PSPS Consequence Model are then calibrated to PG&E's Enterprise Risk Model's MAVF Risk Score for PSPS." For each component in PG&E's MAVF, explain how the results of the PSPS Consequence Model are calibrated to the MAVF.

ANSWER 004

PG&E's PSPS MAVF Risk Score includes safety, reliability, and financial components. The combination of the components results in a total MAVF Risk Score for PSPS.

For Safety, PG&E uses the combination of 50% PG&E PSPS data and 50% US-industry widespread unplanned outage data. Based on blending of the two datasets, PG&E arrives at a Serious Injury or Fatality (SIF) / million Customer Minutes Interrupted (CMI). Details are shown in "*WMP-Discovery2023_DR_CalAdvocates_009-Q004Atch01.pptx*."

For Reliability, PG&E uses the CMI estimates from the historical back-cast for each lookback event. Details are shown in "*WMP-Discovery2023_DR_CalAdvocates_009-Q004Atch02.xlsx*."

For Financial, PG&E uses the historical cost of executing PSPS events and estimates a fixed cost of executing a PSPS and a cost per customer through linear regression. Details are shown in "*WMP-Discovery2023_DR_CalAdvocates_009-Q004Atch03.xlsx*."

PG&E's PSPS consequence model is based off the back-cast of potential PSPS events since 2010 at the customer level. For each customer, the model provides an expected number of CMI based on the PSPS frequency and duration. However, the CMI outputted is not directly converted to MAVF. This is because of the non-linear scaling of the MAVF (1 event with very high CMI impact is not the same as many events with small CMI impacts). As such, PG&E calibrates the PSPS Consequence Model to the Enterprise MAVF risk score by proportionally allocating the percent contribution of each customer CMI of the total times the total MAVF Risk Score. Additionally, PG&E includes a critical customer weighting, for example, a medical baseline customer has a weighting of 2, so the CMI associated with that customer would be equivalently double that of a regular customer.

As an example:

The Overall MAVF Risk Score is 100

Customer 1 (medical baseline) experiences 10 CMI

Customer 2 (regular) experiences 30 CMI

Customer 1's equivalent CMI is $10 \text{ CMI} * 2 \text{ weighting} = 20 \text{ CMI}$

Customer 2's equivalent CMI is $30 \text{ CMI} * 1 \text{ weighting} = 30 \text{ CMI}$

Customer 1's MAVF = $100 * (20)/(20+30) = 40 \text{ MAVF}$

Customer 2's MAVF = $100 * (30)/(20+30) = 60 \text{ MAVF}$