

PACIFIC GAS AND ELECTRIC COMPANY
Wildfire Mitigation Plans
Rulemaking 18-10-007
Data Response

PG&E Data Request No.:	WSD_010-Q01		
PG&E File Name:	WildfireMitigationPlans_DR_WSD_010-Q01		
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PG&E Witness:		Requester:	Ryan Arba

QUESTION 01

SCE and SDG&E chose to utilize outage data, not ignition data, to train their Wildfire Models.

- a. What are all of the factors that differ between PG&E and the other two IOUs that would factor into PG&E choosing to utilize a different type of data set for model training and testing than SCE and SDG&E, including consequence risk?

ANSWER 01

In the early model development stages, PG&E trained probability models on outages, wires-down events, and ignitions. During this exploratory stage the multi-disciplinary team that supported the development of the model found the following:

- Outage probability by wildfire consequence could dilute the resulting risk values with locations where an outage with low likelihood of causing an ignition could occur.
- Wire-down probability by wildfire consequence would only represent a fraction of outages with a high likelihood of causing an ignition (i.e. ignitions can occur without the wired down event, such as vegetation blow-ins).
- Not all ignitions stem from outages (i.e. ignitions can occur from fault current that does not create an outage, such as animal contact)

Based on these findings, the team decided that the ignition probability by wildfire consequence was the best causal representation of the events from failure to wildfire. In addition, PG&E chose to use ignitions because there is sufficient ignitions data in the High Fire Threat District (HFTD) areas (over 100 per year), a large pool of covariates related to assets, environmental, and weather, each with a direct relationship to ignitions.

Finally, PG&E notes that it is our understanding that Southern California Edison Company (SCE) based its Probability of Ignition module on “faults that result in a spark” (2020 WMP, Section 4.3), and also in its 2021 GRC filing (SCE-01, Volume 2, Section D) that their Wildfire Risk Model was trained on fault data, which is converted into

ignitions using a “fault to fire” mapping that leverages Fire Potential Index (FPI) scores at a specific location. In these proceedings, SCE did not solely rely on outage data.