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

PG&E Data Request No.:	OEIS_004-Q015		
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Request Date:	May 4, 2023	Requester DR No.:	P-WMP_2023-PG&E-004
Date Sent:	May 9, 2023	Requesting Party:	Office of Energy Infrastructure Safety
DRU Index #:		Requester:	Colin Russell Lang

SUBJECT: REGARDING FEASIBILITY CONSTRAINTS

QUESTION 015

PG&E must provide an explanation of how, if at all, feasibility constraints impact the decision making of its Wildfire Governance Steering Committee in selecting a portfolio of mitigation measures that deviates from the risk informed prioritization. This should include:

a. A flowchart or explanation of decision-making as processed by the Wildfire Governance Steering Committee, including where feasibility constraints are accounted for

b. The correlation between raw V3 risk outputs and WFE

c. The correlation between WFE and feasibility

d. Any associated shifts in prioritization due to implementing feasibility constraints

e. A list of any projects not included within UG scope due to feasibility constraints

ANSWER 015

PG&E respectfully objects to this request to the extent the request incorrectly implies PG&E does not use a "risk-informed prioritization" when selecting wildfire mitigations. As described throughout the 2023-2025 WMP, and specifically in Section 7.1.4.2, we begin developing our list of proposed mitigations by analyzing risk events, risk drivers, and consequences. Subject to and without waiving these objections, PG&E responds as follows:

a. Please see attachment *"WMP-Discovery2023_DR_OEIS_004-Q015Atch01.pdf."* This decision tree reflects the process we followed to further analyze our highest risk undergrounding circuits included in the WMP. The process, as shown on the decision tree attachment and described below, is split into four key phases.

   1. **Circuit Segment Risk Ranking (purple box)**: First prioritize circuit segments in the locations where wildfire risk is the highest based on the latest wildfire distribution risk model (currently WDRM v3).

   2. **Circuit Selection Prioritization Process (blue boxes):** Then identify potential environmental conditions that impact feasibility of undergrounding

(water crossing, rock type, gradient), and calculate wildfire feasibility efficiency (WFE) by circuit segment to prioritize undergrounding in the locations where WFE is the highest.

3. **Feasibility Study (green boxes):** First, we confirm the segment identified is not already completed or included in existing work. Then, engineering review identifies opportunities to improve efficiencies and mitigate additional impacts, including adjusting the project to mitigate PSPS or EPSS impacts, determining if undergrounding is unfeasible (if so, identifying alternatives such as overhead, remote grid or hybrid), and confirming if there are any recent changes to the electric assets.
4. **Field Scoping (orange boxes):** Field scoping then takes place, which is focused on identifying impediments to the proposed project route and determining if a route or scope change is needed. If so, an alternative route is developed. Then, we sequence bundled miles and begin the planning phase of work.

b. As discussed in the 2023 WMP Pg. 968, PG&E evaluated the statistical significance and influence of risk compared to feasibility, and based on the Pearson correlative coefficient, WFE and risk are 93.7 percent correlative.

c. As discussed in the 2023 WMP Pg. 968, PG&E evaluated the statistical significance and influence of risk compared to feasibility, and based on the Pearson correlative coefficient, WFE and feasibility is only 10.8 percent correlative.

d. Implementing WFE does shift prioritization from a risk rank explicit list. Given the potential to reduce unit costs through a scaled undergrounding program, PG&E developed a process for scoping, bundling, and tranching potential UG mile locations based on wildfire risk and feasibility. To account for operational and executability factors, we needed to consider the variability in cost due to the terrain difficulty when transitioning an existing OH location to UG. For instance, on average, it takes 1.25 UG install miles to replace 1 OH mile. However, at times, this multiplier can be 2-3 times greater, especially in the highest risk locations, because of existing OH circuitry traversing steep gradient and water crossings. In these areas underground miles would need to be relocated to run along roads, winding around the terrain features. PG&E developed the feasibility measurement to identify where we could most efficiently reduce risk given the terrain feasibility at a particular location due to the presence of hard rock, large water crossings and/or gradient.

e. There were no projects directly excluded from the potential 10,000 miles UG scope due to feasibility constraints. Locations where UG is deemed infeasible are studied in the feasibility study and field scoping portions of our process to determine alternative mitigations and routes based on the impediments identified.