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

PG&E Data Request No.:	CalAdvocates_043-Q01		
PG&E File Name:	WildfireMitigationPlans_DR_CalAdvocates_043-Q01		
Request Date:	February 25, 2021	Requester DR No.:	CalAdvocates-PGE-2021WMP-09
Date Sent:	March 2, 2021	Requesting Party:	Public Advocates Office
PG&E Witness:		Requester:	Alan Wehrman

SUBJECT: CLIMATE MODELING

The following questions related to PG&E's 2021 Wildfire Mitigation Plan (WMP) Update.

QUESTION 01

Page (P.) 70 of PG&E's 2021 WMP discusses the PG&E Operational Mesoscale Modeling System (POMMS). PG&E states, "PG&E utilized the same weather model configuration to produce a 30 - year, hour-by-hour historical weather and fuels climatology also at 2 x 2 km resolution."

a. What weather attributes (e.g., wind speed or temperature) does PG&E's 30-year weather climatology include?
b. List the historical data sources used to develop PG&E's 30-year weather climatology.
c. How did PG&E validate the accuracy of its modeled 30-year weather climatology?
d. Please provide any workpapers or other documents associated with the development of the 30-year weather climatology.
e. Please provide any workpapers or other documents associated with validation of the 30-year weather climatology.

ANSWER 01

The attachments to this response contain confidential information as described in the Confidentiality Declaration of Meredith Allen, dated March 2, 2021

a. PG&E's 30-year weather climatology includes the following weather attributes:
    a. Wind speed
    b. Temperature
    c. Relative humidity
    d. Surface pressure
    e. Precipitation

b. The Weather Research and Forecast model (WRF) version 4.1.2 was selected for this project. The 30-year climatology data were constructed using a standard technique of downscaling the NCEP Climate Forecast System Reanalysis data for the period of interest. The reanalysis datasets are global, high-resolution, coupled atmosphere-ocean-land surface-sea ice systems that provide the best estimate of the state of these coupled domains. The WRF model is then used to "downscale" the reanalysis data to more granular resolution over a domain of interest. A very similar technique was used to create the climatology data from 2004 – 2013 that forms the basis of the CPUC HFTD map.

c. Nearly 20 model configurations of WRF were run on a variety of test cases covering high wind and precipitation events. Model outputs from each case were validated against the hundreds of weather stations now available in the PG&E territory, including the hundreds of stations PG&E has deployed since 2018. The ultimate goal was to find the optimal WRF model configuration that produced the most accurate simulations over a range of high impact events for a range of meteorological parameters. PG&E is submitting the project report that describes how the model configuration and historical data were validated.
See : WildfireMitigationPlans_DR_CalAdvocates_043-Q01Atch01CONF.pdf

d. PG&E objects to this request on the grounds that the phrase "any workpapers or other documents" is overbroad and unduly burdensome given the three-day response deadline for this request. PG&E also objects to this request to the extent it asks for documents in violation of the attorney-client privilege or work product doctrine.

   Subject to and without waiving these objections, PG&E submits the project report that describes how the model configuration and historical data were developed and validated. See: WildfireMitigationPlans_DR_CalAdvocates_043-Q01Atch01CONF.pdf

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