THE PUBLIC ADVOCATES OFFICE DATA REQUEST:
CALADVOCATES-SDGE-2022 WMP-13
SDG&E RESPONSE

Date Received: March 25, 2022
Date Submitted: March 30, 2022

I. GENERAL OBJECTIONS

1. SDG&E objects generally to each request to the extent that it seeks information protected by the attorney-client privilege, the attorney work product doctrine, or any other applicable privilege or evidentiary doctrine. No information protected by such privileges will be knowingly disclosed.

2. SDG&E objects generally to each request that is overly broad and unduly burdensome. As part of this objection, SDG&E objects to discovery requests that seek "all documents" or "each and every document" and similarly worded requests on the grounds that such requests are unreasonably cumulative and duplicative, fail to identify with specificity the information or material sought, and create an unreasonable burden compared to the likelihood of such requests leading to the discovery of admissible evidence. Notwithstanding this objection, SDG&E will produce all relevant, non-privileged information not otherwise objected to that it is able to locate after reasonable inquiry.

3. SDG&E objects generally to each request to the extent that the request is vague, unintelligible, or fails to identify with sufficient particularity the information or documents requested and, thus, is not susceptible to response at this time.

4. SDG&E objects generally to each request that: (1) asks for a legal conclusion to be drawn or legal research to be conducted on the grounds that such requests are not designed to elicit facts and, thus, violate the principles underlying discovery; (2) requires SDG&E to do legal research or perform additional analyses to respond to the request; or (3) seeks access to counsel's legal research, analyses or theories.

5. SDG&E objects generally to each request to the extent it seeks information or documents that are not reasonably calculated to lead to the discovery of admissible evidence.

6. SDG&E objects generally to each request to the extent that it is unreasonably duplicative or cumulative of other requests.

7. SDG&E objects generally to each request to the extent that it would require SDG&E to search its files for matters of public record such as filings, testimony, transcripts, decisions, orders, reports or other information, whether available in the public domain or through FERC or CPUC sources.

8. SDG&E objects generally to each request to the extent that it seeks information or documents that are not in the possession, custody or control of SDG&E.

9. SDG&E objects generally to each request to the extent that the request would impose an

undue burden on SDG&E by requiring it to perform studies, analyses or calculations or to create documents that do not currently exist.

10. SDG&E objects generally to each request that calls for information that contains trade secrets, is privileged or otherwise entitled to confidential protection by reference to statutory protection. SDG&E objects to providing such information absent an appropriate protective order.

II. EXPRESS RESERVATIONS

1. No response, objection, limitation or lack thereof, set forth in these responses and objections shall be deemed an admission or representation by SDG&E as to the existence or nonexistence of the requested information or that any such information is relevant or admissible.

2. SDG&E reserves the right to modify or supplement its responses and objections to each request, and the provision of any information pursuant to any request is not a waiver of that right.

3. SDG&E reserves the right to rely, at any time, upon subsequently discovered information.

4. These responses are made solely for the purpose of this proceeding and for no other purpose.

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III. RESPONSES

QUESTION 1

Regarding the Wildfire Risk Reduction Model (WRRM) discussed in pages 97-108 of your WMP:

a) Cal Advocates understands that the "conditional impact" component of WRRM corresponds to consequence in the familiar equation "risk = probability x consequence." Is this correct?
b) If the answer is no to part (a), please explain the meaning of "conditional impact" and how it differs from consequence.
c) What duration of fire simulation does SDG&E use to model wildfire consequence in WRRM?
d) Please explain the reasoning for your choice of fire simulation duration in WRRM.
e) Page 104 of your WMP states that "Figure 4-23 displays the resulting fireplain from a simulation with a 15-hour duration." Does this imply that SDG&E uses 15-hour fire spread simulations for WRRM? If not, please explain.
f) What assumptions do you make about fire suppression efforts when modeling wildfire consequence in WRRM?
g) Describe how you model the effects of fire suppression on fire spread for WRRM.

RESPONSE 1

a) Yes, this is correct.

b) N/A

c) There are currently 2 versions of WRRM used in SDG&E's models. The most recent version received in August 2021, uses an 8-hour duration. The prior version of WRRM utilizes a variable duration per ignition point, that is based on 120 weather modeling scenarios. To compute this duration, a simulation was run whereby an optimal duration was calculated for each ignition point, based on a wind speed and fuel moisture curve. The maximum duration possible is 15 hours.

d) The deciding factor for using the 8 hour or variable duration version of WRRM is based on model applicability. While SDG&E aims to use the most current 8-hour simulation version of the WRRM model, there are considerable differences between the two versions. Models that have leveraged the variable duration model need to undergo development, testing, and quality assurance phases prior to converting to the 8-hour version. The development phase for this conversion is currently underway.

e) As stated in Q1-C, the newest version of WRRM uses an 8 hour simulation, while the previous version uses a variable duration with a maximum possible 15 hour duration. Figure 4-23 comes from the variable duration version documentation.

f) Fire suppression is assumed to vary based on a geographic distribution. The geographic distribution is based on a building loss factor across SDG&E's service territory.

g) Fire suppression is included in the WRRM Conditional Impact score as a building loss factor based on a geographic distribution (GIS feature class). While this is not an explicit suppression index, the empirical data used to derive the metric is reflective of suppression effectiveness.

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QUESTION 2

Regarding the WRRM-Ops model discussed in pages 108-114 of your WMP:

a) What duration of fire simulation does SDG&E use in WRRM-Ops?
b) Please explain the reasoning for your choice of fire simulation duration in WRRM-Ops.
c) Page 110 of your WMP states that fire behavior outputs "are only shown for the final time slice of the prediction duration, i.e., hour 8 of an 8-hour duration." Does this imply that SDG&E uses 8-hour fire spread simulations for WRRM-Ops? If not, please explain.
d) If you use different durations of fire simulations in WRRM versus WRRM-Ops, please explain why.
e) Describe how you model the effects of fire suppression on fire spread for WRRM-Ops.

RESPONSE 2

Regarding the WRRM-Ops model discussed in pages 108-114 of your WMP:

a) The WRRM-Ops (FireCast) simulations are run for 8-hour representing a typical first burning period. This affords consistency when comparing risk outputs. However, this can be varied if desired by SDGE to any duration up to 84 hours.

b)
   a. An eight hour duration represents a typical first burning period of fires. An analysis of fires over the past 30 years reflects that destructive fires can be identified most often, typically about 80+% of the time, from their behavior in the first burning period.
   b. Substantial testing was undertaken with other variable duration using a duration probability approach based on specific fire weather conditions, however the results are very difficult to substantiate due to the varying duration for different assets. We found the results more reliable, and comparable, using an 8-hour duration. Use of fire simulation tools, like Technosylva's Wildfire Analyst Enterprise, can be used to substantiate and test results very effectively.

c) SDG&E does use an 8-hour fire spread simulation for WRRM-Ops.

d) Simulation durations for the current WRRM model are eight hours, reflecting a typical first burning period of a fire. The Conditional Impact score from the pre-2021 version of WRRM, which uses the variable duration method described in Question 1-C, is currently used in models that were developed prior to 2021. These models are being actively transitioned to the most recent version WRRM version.

e)

a. Currently the Technosylva Wildfire Analyst Enterprise software does not incorporate suppression effectiveness into simulations. However, development of a suppression effectiveness model is currently underway and being tested for implementation during the California 2022 fire season. This will include both WRRM and WFA-E FireCast simulations. This new model will use advanced data analytics developed and tested operationally with CAL FIRE during the 2021 fire season.
b. It is important to note that WFA-E (WRRM & WRRM-Ops) currently calculates an Initial Attack Index metric for each simulation. The IAA reflects the likelihood of the fire simulation escaping initial attack, based on fire behavior and growth characteristics, independent of how many resources are available to fight the fire. This metric has been developed and tested with CAL FIRE over the past two years to help identify those fires, or simulations, that are of concern.

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QUESTION 3

Regarding the Wildfire Next Generation System (WiNGS) - Planning model discussed in pages 120-129 of your WMP:

a) Do you use the same methods and assumptions to model wildfire spread and consequence in WiNGS-Planning as in WRRM?
b) If your answer to part (a) is no, why not?
c) If your answer to part (a) is no, what duration of fire simulation does SDG&E use to model wildfire consequence in WiNGS-Planning?
d) If your answer to part (a) is no, what assumptions do you make about fire suppression efforts when modeling wildfire consequence in WiNGS-Planning?
e) If your answer to part (a) is no, describe how you model the effects of fire suppression on fire spread for WiNGS-Planning.

RESPONSE 3

a) The WiNGS-Planning modeling tool directly utilizes the simulation outputs from the WRRM model to produce its wildfire consequence metrics. As a result, the same methods and assumptions that apply to the WRRM model with regards to wildfire consequence apply to the WiNGS-Planning model as well.
b) n/a
c) n/a
d) n/a
e) n/a

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QUESTION 4

Regarding the WiNGS-Ops model discussed in pages 129-135 of your WMP:

a) Page 130 of your WMP identifies PSPS Consequence as a data element in the WiNGS-Ops model. Please provide any workpapers you used to estimate PSPS consequence for this model.
b) Table 4-19 (on pages 130-131) of your WMP identifies "Serious Injuries and Fatalities (SIF) per customer-minutes" as a variable in the WiNGS-Ops model. State the numerical value(s) you used for this variable.
c) State the basis of your estimate of "Serious Injuries and Fatalities (SIF) per customer-minutes" referenced in Table 4-19 of your WMP.
d) Table 4-19 (on pages 130-131) of your WMP identifies "dollars per affected customer" as a variable in the WiNGS-Ops model. State the numerical value(s) you used for this variable.
e) State the basis of your estimate of "dollars per affected customer" referenced in Table 4-19 of your WMP.

RESPONSE 4

a) Table 4-19 provides the full methodology for calculating PSPS consequence. There are no additional workpapers. The values used for estimating PSPS consequences are reported in Post-PSPS reports.
b) During the November 24 – November 26 PSPS event, SDG&E estimated a value of 10 billion customer-minutes for the "Serious Injuries and Fatalities (SIF) per customer-minutes" variable referenced in Table 4-19 based on the history of 0 fatalities in SDG&E during PSPS events. However, SDG&E is exploring other methods for estimating this value with increased customer granularity to better account for customers with access and functional needs.
c) The values used for this variable are reported in the Post-PSPS reports. To date, only one PSPS event has used this methodology, the November 24 – November 26 event, and the report for this event can be found here: R1812005 SDGE PSPS Post-Event Report Nov. 24-26.pdf
d) During the November 24 – November 26 PSPS event, SDG&E estimated a value of $250 for the "dollars per affected customer" variable referenced in Table 4-19, which is consistent with the value used by other California Investor-Owned Utilities. However, SDG&E is exploring other methods for estimating this value that is more specific to SDG&E and better accounts for customers with access and functional needs.

END OF REQUEST