THE PUBLIC ADVOCATES OFFICE DATA REQUEST:
CALADVOCATES-SDGE-2022 WMP-07
SDG&E RESPONSE

Date Received: February 24, 2022
Date Submitted: March 1, 2022

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.

QUESTION 1

On page (p.) 196 of SDG&E's 2022 WMP, SDG&E states that "Working with Technosylva and others, SDG&E is implementing innovative approaches to leverage these models for the evaluation of hardening projects and for the safe operation of the system."

a) Explain, in detail, SDG&E's work with Technosylva in the context of the quote above.

b) Explain, in detail the "innovative approaches" that SDG&E discussed with Technosylva in the context of the quote above.

c) What is SDG&E's time frame to implement the approaches addressed in part (b)?

RESPONSE 1

SDG&E objects to the Question on the grounds set forth in General Objection Nos. 2, 3, and 7. Subject to the foregoing objections, SDG&E responds as follows:

a) SDG&E and Technosylva have collaborated since 2015 on the Wildfire Risk Reduction Model (WRRM) to quantify wildfire risk from both the perspective of wildfire conditional impact resulting from electric assets as well as asset ignition likelihood. Technosylva has simulated fire growth over 8-hour periods using electric asset locations as ignition sources and has estimated the monetary damage that would result from each ignition source. The conditional impact score from the WRRM model is used in the WiNGS Planning model in determining consequence should a fire occur on a WiNGS segment. As stated in the 2022 WMP Update, "SDG&E relies on the WRRM/Technosylva conditional impact value to help assess the consequence of an ignition if it were to occur. The conditional impact value gets utilized within the Multi-Attribute Value Framework (MAVF) function of the wildfire risk component of the WiNGS Planning model. This in turn helps the prioritization of mitigation efforts by identifying the highest risk circuit-segments in the system that are comparatively more likely to result in a catastrophic wildfire."

b) The innovative approaches that are alluded to in Question 1 focus on the wildfire impact aspect of the model. The area of focus for this work are Tier's 2 and 3 of the High Fire Threat District (HFTD). To model wildfire spread, Technosylva ran millions of computer simulations covering thousands of possible asset ignition locations in SDG&E's system. The output of these simulations is a conditional impact score based on a monetary figure for the number of buildings impacted for each event.

   In 2021, the WRRM update included many enhancements and refinements. As stated in the 2022 WMP update, these enhancements include
   - Updated the software platform to increase ease of use

- Updated the LFM data in the model to improve consequence modeling
- Updated the fire growth algorithms to improve the accuracy of consequence modeling
- Fire consequence analysis was reran using latest weather history
- Likelihood score is no longer included in WRRM calculations.

The output of the 2021 WRRM update also includes new attributes, such as
- Number of buildings impacted
- Populations impacted
- Acres burned
- Flame length
- Rate of spread
- Fire Behavior Index (FBI)

For more information on WRRM methodology please refer to section 4.5.1.3 Wildfire Risk Reduction Model, page 103 of the 2022 WMP Update.

In 2021, SDG&E also received the Risk Associated with Value Exposure (RAVE) data set from Technosylva, which contains a myriad of data pertinent to risk analytics. The purpose of this data is to describe the attributes for the areas of potential impact resulting from asset related ignitions and develop a landscape risk score. Attributes included in the RAVE data set include building density, number of buildings, road availability (egress), senior population ratio, disability population ratio, poverty population ratio, and more. Technosylva states that the RAVE data is intended to be combined with the Risk Associated with Ignition Locations (RAIL) from FireCast and WRRM to create a composite asset risk score.

c) SDG&E has been using the WRRM model since 2016, beginning with the FiRM project. WRRM is also used in both the WiNGS Planning and WiNGS Ops models to account for consequence related aspects of ignitions. WiNGS Ops is the first model to use the 2021 updated WRRM outputs, having integrated the new output into the model in late 2021. SDG&E intends to integrate the 2021 updates into the WiNGS Planning model by the 3rd quarter of 2022.

The RAVE data set along with its intended usage is currently being evaluated by Enterprise Risk Analytics and WMP Risk Data Analytics.

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QUESTION 2

In Section 4.5.1.7 of SDG&E's 2022 WMP titled "4.5.1.7 Wildfire Next Generation System-Planning," SDG&E states "The use of WiNGS-Planning to inform priorities in the WMP is limited to some of the covered conductor and undergrounding scope identified for 2022 as well as the Standby Power Program."

a) Does SDG&E's WiNGS-Planning model provide any analysis or output that is then used in SDG&E's WiNGS-Ops model?

b) If yes to part a), please explain how SDG&E's WiNGS-Planning model influences the WiNGS-Ops model.

c) Does SDG&E anticipate that its WiNGS-Planning model will be used from 2023 onward as the main model that will influence where SDG&E will prioritize wildfire mitigation initiatives beyond covered conductor, undergrounding, and the Standby Power Program?

d) If yes to part c), please explain how the WiNGS-Planning model analysis will be used from 2023 onward to determine where future wildfire mitigation initiatives are prioritized since the use is currently limited to grid hardening initiates.

RESPONSE 2

SDG&E objects to the Question on the grounds set forth in General Objection Nos. 2, 3, and 7. Subject to the foregoing objections, SDG&E responds as follows:

a) WiNGS-Planning and WiNGS-Ops are independent products that do not share outputs or dependencies. However, both products share the same stakeholders, and therefore the business logic, quantifications, and assumptions are generally aligned.

b) N/A

c) The WiNGS-Planning model utilization for 2023 and onwards will continue to include the mitigation options detailed in the model documentation contained in the 2022 WMP, with primary focus remaining on covered conductor and undergrounding. Additionally, the microgrid initiative as a mitigation option will be explored to be integrated into WiNGS-Planning.

d) Microgrids will be explored as a mitigation option to integrate into the WiNGS-Planning model. If deemed appropriate and effective to be included within WiNGS-Planning, the framework for that mitigation alternative would likely resemble the existing ones in the model, namely having characteristic risk reduction, cost, and risk spend efficiency (RSE)

metrics associated to it at the circuit-segment level, and subsequently utilized within the grid hardening decision tree process detailed in Section 4.5.1.7 Figure 4-30 of the 2022 WMP Update.

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QUESTION 3

In Section 4.5.1.8 of SDG&E's 2022 WMP titled "Wildfire Next Generation System-Operations," SDG&E states "WiNGS-Ops is a new iteratively-improving, real-time risk assessment model built to evaluate and compare Wildfire and PSPS risks at the asset level (pole/span) and the sub-circuit/segment level at hourly intervals."

a) In 2022, does SDG&E intend to use the WiNGS-Ops model to evaluate wildfire risks **only** for PSPS decision-making?

b) If the answer to part (a) is yes, please explain why the WiNGS-Ops is will be used for PSPS decision-making only.

c) If the answer to part (a) is no, for which other wildfire mitigation initiatives and programs does SDG&E intend to use the WiNGS-Ops model to evaluate risks in 2022?

RESPONSE 3

SDG&E objects to the Question on the grounds set forth in General Objection Nos. 2, 3, and 7. Subject to the foregoing objections, SDG&E responds as follows:

a) In 2022, WiNGS-Ops is only *capable* of evaluating wildfire risk for PSPS decision-making. SDG&E will continue to explore the applicability of expanding WiNGS-Ops for additional decision-making processes in future years.

b) PSPS is the only mitigation strategy whereby decisions are made in real-time.

c) N/A – see response to 3a.

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QUESTION 4

In Section 7.3.6.1 of SDG&E's 2022 WMP titled "Automatic recloser operations," SDG&E describes the "Wide Area Situational Awareness (WASA) Project," which "is expected to go into production Quarter 1 of 2022."

a) Which line of Table 12 of SDG&E's February 11, 2022 non-spatial data (2022 WMP Attachment B) reflects the costs associated with the project referenced above?

b) Did SDG&E perform work related to the WASA project in 2021?

c) If the answer to part (b) is yes, which line of Table 12 of SDG&E's February 1, 2022 non-spatial data (Q4 2021 Quarterly Data Report) reflects the costs associated with the work performed in 2021 for the WASA project?

RESPONSE 4

SDG&E objects to the Question on the grounds set forth in General Objection Nos. 2, 3, 5, and 7. Subject to the foregoing objections, SDG&E responds as follows:

a) SDG&E did not submit costs in its Table 12 February 11, 2022 non-spatial data (2022 WMP Attachment B) for the WASA project because this project is funded outside the WMP. SDG&E included the project narrative as applicable to benefiting operations during high fire threat periods by adding advanced situational awareness to their displays, but did not fund the effort through WMP. It is transmission funded.

b) Yes

c) SDG&E did not submit costs in its Table 12 February 11, 2022 non-spatial data (2022 WMP Attachment B) for the WASA project because this project is non-WMP funded. SDG&E included the project narrative because it offers operational benefits during high fire threat periods by adding advanced situational awareness to their displays, but the effort was funded separately.

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QUESTION 5

In Table 12 of the February 11, 2022 non-spatial data (2022 WMP Attachment B), SDG&E provides costs and targets for the Generator Grant Program. In the table, SDG&E reports that in 2021, it provided grant funding for 2,310 units, and total opex spending of $7.9 million. For 2022, SDG&E forecasted providing grant funding for 2,000 units, and total opex spending of $10.4 million.

a) Please explain the increase in forecast costs per grant in 2022, compared to 2021, as referenced above.

b) Please explain the decrease in the number of grants forecasted to be provided in 2022, compared to 2021, as referenced above.

RESPONSE 5

SDG&E objects to the Question on the grounds set forth in General Objection Nos. 2, 3, and 7. Subject to the foregoing objections, SDG&E responds as follows:

a) Forecast costs were increased to provide a target of 3,000 grants in 2022, compared to 2,000 in 2021. See the below response for additional detail on the number of grants.
b) The correct forecast number of grants for 2022 is actually 3,000. The 2,000 units initially reflected in Table 12 was a typographical error and a revised Table 12 will be submitted.

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QUESTION 6

For the Generator Grant Program in Table 12 of the February 11, 2022 non-spatial data (2022 WMP Attachment B), please provide:

a) The average cash value of grants provided in 2020.

b) The average cash value of grants provided in 2021.

c) Your forecast average cash value of grants for 2022.

RESPONSE 6

SDG&E objects to the Question on the grounds set forth in General Objection Nos. 2, 3, and 7. Subject to the foregoing objections, SDG&E responds as follows:

a) Average cash value of backup battery grant packages provided to 1,420 eligible customers in 2020:

Product	2020 Product Costs		Total Costs x1,420 Grants Provided	
	Wholesale	Retail	Wholesale	Retail
Yeti 3000 Backup Battery	$ 2,250.00	$ 3,199.95	$ 3,195,000.00	$ 4,543,929.00
Boulder 100 Solar Briefcase	$ 225.00	$ 299.95	$ 319,500.00	$ 425,929.00
8mm Car Charging Adapter	$ 28.00	$ 39.95	$ 39,760.00	$ 56,729.00
8mm Extension Cable	$ 15.00	$ 24.95	$ 21,300.00	$ 35,429.00
Grand Totals	**$ 2,518.00**	**$ 3,564.80**	**$ 3,575,560.00**	**$ 5,062,016.00**

b) Average cash value of backup battery grant packages provided to 2,310 eligible customers in 2021:

Product	2021 Product Costs		Total Costs x2,310 Grants Provided	
	Wholesale	Retail	Wholesale	Retail
Yeti 3000x Backup Battery	$ 2,400.00	$ 3,199.95	$ 5,544,000.00	$ 7,391,884.50
Boulder 100 Solar Briefcase	$ 225.00	$ 299.95	$ 519,750.00	$ 692,884.50
8mm Car Charging Adapter	$ 28.00	$ 39.95	$ 64,680.00	$ 92,284.50
8mm Extension Cable	$ 15.00	$ 24.95	$ 34,650.00	$ 57,634.50
Grand Totals	**$ 2,668.00**	**$ 3,564.80**	**$ 6,163,080.00**	**$ 8,234,688.00**

c) Forecasted cash value of backup battery grant packages provided to 3,000 eligible customers in 2022:

Product	Forecasted 2022 Product Costs		Total Costs x3,000 Grants Provided	
	Wholesale	Retail	Wholesale	Retail
Backup Battery	$ 2,625.00	$ 3,499.95	$ 7,875,000.00	$ 10,499,850.00
Solar Charging Panel	$ 225.00	$ 299.95	$ 675,000.00	$ 899,850.00
Car Charging Adapter	$ 28.00	$ 39.95	$ 84,000.00	$ 119,850.00
30' Extension Cable	$ 15.00	$ 24.95	$ 45,000.00	$ 74,850.00
Grand Totals	**$ 2,893.00**	**$ 3,864.80**	**$ 8,679,000.00**	**$ 11,594,400.00**

END OF REQUEST