WILDFIRE SAFETY DIVISION DATA REQUEST: WSD-SDGE-02
2021 WILDFIRE MITIGATION PLAN UPDATE
SDG&E RESPONSE

Date Received: March 1, 2021
Date Submitted: March 4, 2021

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.

III. RESPONSES

QUESTION 1:

Explain your company's grid infrastructure rebuild standards (e.g., under-grounding, covered conductor, etc.) utilized for post-fire repairs and replacements.

OBJECTION:

SDG&E objects to this request on the grounds set forth in General Objection Nos. 2, 5, and 9. Subject to the foregoing objections, SDG&E responds as follows.

RESPONSE 1:

When rebuilding infrastructure for post-fire repairs and replacements, SDG&E adheres to the latest design standards to replace the infrastructure with equipment approved for the area to restore service as quickly as possible for customers still requiring power. After the event, SDG&E will perform a root cause analysis and determine if future modifications are needed in the area to minimize the risk of any future events. Covered conductor or undergrounding are not currently required for post-fire repairs and replacements.

WILDFIRE SAFETY DIVISION DATA REQUEST: WSD-SDGE-02
2021 WILDFIRE MITIGATION PLAN UPDATE
SDG&E RESPONSE

Date Received: March 1, 2021
Date Submitted: March 4, 2021

QUESTION 2:

In order to demonstrate adequacy of size of service restoration workforce (requirement 8386(c)(15)) provide the following:

a. Describe your current service restoration processes (i.e., damage assessments, repairs, switching activities, etc.) and tools (boots on the ground, drones, helicopters, etc.).
b. Report the type and number of each personnel classification currently employed by [insert utility] that are involved in service restoration activities, including an explanation of what roles and responsibilities they have.
c. How many mutual aid agreements does the utility have in place? Explain the type and number of personnel classifications involved in each agreement (or the total number for all agreements).
d. How many contractors are in place for service restoration? Explain the type and number of personnel classifications retained as contractors.

OBJECTION:

SDG&E objects to this request on the grounds set forth in General Objection Nos. 2, 5, and 9. Subject to the foregoing objections, SDG&E responds as follows.

RESPONSE 2:

a. In response to a catastrophic or extensive wildfire event causing damage to electric distribution facilities, SDG&E mobilizes an all-hands field and office workforce featuring an interdepartmental, shift-based, modularized event response team derived from Federal Emergency Management Agency (FEMA) Incident Command System (ICS) principles. At the onset of the event, usually reported through coordination with local fire agencies' incident command units, SDG&E deploys first responders such as electric troubleshooters to observe and report field conditions, provide an initial damage assessment, make conditions safer by implementing small-scale damage isolation (i.e., switching), and create damage assessment forms noting what type of labor and material are required to repair the damage. Construction supervisors, engineers, and other office staff manage network topology (i.e., fire perimeter mapping), customer, and damage-related data to continually inform the utility Incident Commander (IC) of event risks and priorities. The IC mobilizes an organization of section chiefs to lead Operations, Planning, Logistics, and Resource Coordination.

   The Operations section's key objectives include bulk damage inspection, reconstruction line crew deployments, including initial make-safe strike teams, helicopter and drone operations to report damage perimeter and structure counts as dispatched in coordination between SDG&E Aviation Services and Fire Coordination in CAL FIRE-controlled

airspace. This section provides central field command of re-energization of de-energized or reconstructed facilities (e.g., hold authorizations).

The Planning section's key objectives include prioritization of reconstruction in affected areas and mobilizing modular field design teams. Following initial field assessments done in the Operations Section, planners will also perform field assessments to create designs and perform or request pole loading calculations as required. These assessments will typically be done visually on foot, but in the case of difficult terrain could employ drones. Pole loading calculations are performed on O-Calc or PLS-CADD as required by SDG&E standards. Completed designs are prioritized by Construction Supervisors and sent to the appropriate resources for construction. The construction crews, which will consist of Working Foremen, Linemen, Apprentice Lineman, and Line Assistants will perform the work and the required switching to energize the new facilities. Depending on the terrain, this work could be accomplished with bucket trucks accessing facilities, or helicopters setting the equipment.

The Logistics section's key objectives include mobilizing various resources in aid of expedited construction, including pole hole digging operations, securing and transporting material (e.g., critical pole stock), and mobilizing staging sites.

The Resource Coordination (RC) section's key objectives include managing critical event response personnel across multiple business units. The RC team, typically made up of crew schedulers, leaders from non-affected business units, and other administrators aims to balance event response resource needs with blue sky operations and develops resource plans in coordination with the Planning Section to maintain operational shifts that drive a consistent pace of construction and cyclical worker rest periods (e.g., 16-hour crew shifts).

b. Please refer to the table below:

Role	Description	Internal Quantity
Planner	Planners are responsible for fielding and designing electric distribution facilities.	33
Construction Supervisor	Construction supervisors are responsible for prioritizing work and directing the field crews.	29
Electric Troubleshooter	Electric Troubleshooters are the first responders to outages or damages to SDG&E facilities. They are responsible for assessing the damage, making the scene safe, and requesting follow-up repairs.	39
Working Foreman	The working foreman is a qualified electrical worker (QEW) that leads the crew by assigning work amongst crew members, holding safety tailgates, and ensuring construction and switching is done according to plan.	35

Role	Description	Internal Quantity
Lineman	A lineman is a QEW that has completed the Lineman Apprentice Program and passed the Journeyman Lineman test. They are part of the crew that performs restoration construction and switching.	142
Apprentice Lineman	Apprentice Linemen are currently in the SDG&E Apprentice program. An Apprentice Lineman may be qualified to only work on secondary voltages (up to 600V) or on primary voltages depending on where they are in their apprenticeship. They can work on electrical facilities for which they are qualified under the supervision of a QEW.	62
Line Assistant	Line assistants are not qualified to work on electrical facilities. They assist with obtaining and preparing materials for the crew.	18

c. SDG&E has four Mutual Assistance Agreements in place that in enable cross-utility collaboration. The following are based on areas and regions: (1) for California there is Mutual Assistance Agreements among members of California Utilities Emergency Association (CUEA), (2) for the Western U.S. there is the Western Region Mutual Assistance Agreement for Electric and Natural Gas Utilities (WRMAG), and (3) Nationwide: Edison Electric Institute Mutual Assistance Agreement (EEI). In addition, SDG&E maintains a Mutual Assistance Agreement with American Gas Association (AGA).

d. SDG&E tracks its contract resources by crew. A crew typically consists of one Working Foreman, two to three Linemen, and one Apprentice Lineman or Line Assistant. SDG&E currently has 42 distribution crews available from contract resources, which would equate to:

Role	Contract Quantity
Working Foreman	42
Lineman	84 - 126
Apprentice Lineman or Line Assistant	42

WILDFIRE SAFETY DIVISION DATA REQUEST: WSD-SDGE-02
2021 WILDFIRE MITIGATION PLAN UPDATE
SDG&E RESPONSE

Date Received: March 1, 2021
Date Submitted: March 4, 2021

QUESTION 3:

Enter the total circuit miles for each category in the following table. HFTD = High Fire Threat District, Tx = Transmission Lines, Dx = Distribution Lines, OH = Overhead, UG = Underground

Location	Tx-OH	Tx-UG	Dx-OH	Dx-UG	**TOTAL**
Non-HFTD					
HFTD-Zone 1					
HFTD-Tier 2					
HFTD-Tier 3					
TOTAL					

OBJECTION:

SDG&E objects to this request on the grounds set forth in General Objection Nos. 2, 5, and 9. Subject to the foregoing objections, SDG&E responds as follows.

RESPONSE 3:

Please note that within SDG&E's service territory the HFTD Zone 1 falls within the HFTD Tier 2 and Tier 3. To avoid double counting all data is grouped within Tier 2 and Tier 3.

Location	Tx-OH	Tx-UG	Dx-OH	Dx-UG	**TOTAL**
Non-HFTD	820	141	2984	8240	**12185**
HFTD-Zone 1					
HFTD-Tier 2	727	34	1818	2232	**4811**
HFTD-Tier 3	278	1	1648	432	**2359**
TOTAL	**1825**	**176**	**6450**	**10904**	**19355**

QUESTION 4:

From the inception of your Public Safety Power Shutoffs (PSPS) program, provide the number of customer hours "on alert" for a PSPS, broken out by calendar year, calculated as the amount of subsections (a) multiplied by (b) below:

a. time between an initial notification of a potential PSPS and a notification of cancellation of PSPS

b. the amount of customers who received both notifications

OBJECTION:

SDG&E objects to this request on the grounds set forth in General Objection Nos. 2, 5, and 9. Subject to the foregoing objections, SDG&E responds as follows.

RESPONSE 4:

PSPS Year	Customer Count [1]	Total Hours [2]
2019	94,320	5,764,694
2020	183,125	12,377,311
2021	8,787	406,545

[1] Contains duplicates if customer was impacted by more than one outage event

[2] Date and time of last message attempt minus date and time of first message attempt

WILDFIRE SAFETY DIVISION DATA REQUEST: WSD-SDGE-02
2021 WILDFIRE MITIGATION PLAN UPDATE
SDG&E RESPONSE

Date Received: March 1, 2021
Date Submitted: March 4, 2021

Updated Table of Risks

As discussed with the WSD, SDG&E provides this updated table of prioritized wildfire risk noting two key amendments:

1. Correcting column header to indicate that 2020 data is included
2. Including transmission data inadvertently filtered out in previous table

The data used is the same data provided in able 7.1 of the 2021 WMP update and represents counts of outages and ignitions. Definitions of the columns are provided below:

1. Cause category: high-level categorization of outage or ignition causes
2. Sub-cause category: more granular categorization of outage or ignition causes
3. Average outage: average annual count of outages (also referred to as risk events) calculated over the span of 2015 – 2020
4. Average ignition rate: shows the average annual ignition-to-outage ratio percentage over the span of 2015 – 2020 and is calculated by dividing total count of ignitions by the total count of outages.
5. Adjusted risk: average annual count of ignitions that have occurred over the span of 2015 – 2020. It's also the product of the average outage and average ignition rate
6. Risk Ranking: ranking of the average annual counts of ignitions over the span of 2015-2020, or the 'Adjusted Risk', in descending order from highest to lowest counts by sub-cause

Cause category	Sub-cause category	2015 - 2020			
		Average Outage	Average Ignition rate	Adjusted Risk	Risk Ranking
Contact from object	Vehicle contact	99.2	4.03%	4.00	1
Contact from object	Balloon contact	118.8	3.23%	3.83	2
Contact from object	Veg. contact	41.3	6.05%	2.50	3
Contact from object	Animal contact	84.8	2.36%	2.00	4
Contact from object	Other contact from object	34.7	5.29%	1.83	5
Equipment / facility failure	Other - Equipment / facility failure	12.2	15.07%	1.83	5
Equipment / facility failure	Connection device damage or failure	50.7	3.29%	1.67	6
Equipment / facility failure	Lightning arrestor damage or failure	24.3	5.48%	1.33	7
Unknown	Unknown	340.0	0.29%	1.00	8
Equipment / facility failure	Conductor damage or failure	44.7	2.24%	1.00	8
Equipment / facility failure	Transformer damage or failure	53.8	1.55%	0.83	9

Cause category	Sub-cause category	2015 - 2020			
		Average Outage	Average Ignition rate	Adjusted Risk	Risk Ranking
Equipment / facility failure	Switch damage or failure	14.5	4.60%	0.67	10
Equipment / facility failure	Fuse damage or failure	73.2	0.68%	0.50	11
Wire-to-wire contact	Wire-to-wire contact / contamination	4.3	11.54%	0.50	11
Equipment / facility failure	Anchor / guy damage or failure	1.8	27.27%	0.50	11
Equipment / facility failure	Capacitor bank damage or failure	9.0	3.70%	0.33	12
Vandalism / Theft	Vandalism / Theft	1.2	28.57%	0.33	12
Equipment / facility failure	Crossarm damage or failure	21.7	0.77%	0.17	13
Equipment / facility failure	Pole damage or failure	36.5	0.46%	0.17	13
Equipment / facility failure	Insulator and bushing damage or failure	16.2	0.00%	0.00	14
Equipment / facility failure	Recloser damage or failure	1.5	0.00%	0.00	14
Equipment / facility failure	Sectionalizer damage or failure	0.0	0.00%	0.00	14
Equipment / facility failure	Voltage regulator / booster damage or failure	0.5	0.00%	0.00	14
Contamination	Contamination	3.2	0.00%	0.00	14
Utility work / Operation	Utility work	5.7	0.00%	0.00	14
Other	All Other	0.2	0.00%	0.00	14