

ENERGY SAFETY DATA REQUEST: OEIS-SDGE-22-002

2022 WMP

SDG&E RESPONSE

Date Received: March 1, 2022

Date Submitted: March 4, 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.

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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:

Climate-driven risk map (Initiative 7.3.1.2) and integration of climate trends into risk models:

- a. Initiative 7.3.1.2 “Climate-driven risk map and modelling based on various relevant weather scenarios” (2022 SDG&E WMP Update p. 200) doesn’t include the details on initiative (parts 1-5). Please provide these details as follows:
 1. Risk to be mitigated / problem to be addressed
 2. Initiative selection (“why” engage in initiative)
 3. Region prioritization (“where” to engage initiative)
 4. Progress on initiative since the last WMP submission and plans, targets, and/or goals for the current year
 5. Future improvements to initiative—include known future plans (beyond the current year) and new/novel strategies the utility may implement in the next five years (e.g., references to and strategies from pilot projects and research detailed in Section 4.4)

See p. 74 of the 2022 Wildfire Mitigation Plan Update Guidelines Template for more information.

- b. Please point to the document page number where SDG&E’s 2022 WMP Update describes how the utility incorporates the climate trends seen in the climate-driven risk map into risk models or other risk-informed analyses that inform mitigation selection/prioritization and decision-making processes.

RESPONSE 1:

1. **Risk to be mitigated / problem to be addressed:** The risk to be mitigated is that climate change is contributing to environmental factors that are increasing wildfire risk across the SDG&E Service Territory. This increased wildfire risk is documented in California’s Fourth Climate Assessment.
2. **Initiative selection (“why” engage in initiative):** It is important to engage in the integration of climate effects into risk mapping because climate science is indicating that the baseline wildfire risk is increasing over time, which is important to long-term planning and decision making.

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3. **Region prioritization (“where” to engage initiative):** When assessing wildfire risk, the regions prioritized are primarily the High Fire Threat District, though analysis is conducted across the entire region to better understand the potential impacts across coastal canyons and the wildland urban interface.

 4. **Progress on initiative since the last WMP submission and plans, targets, and/or goals for the current year:** Since the last WMP submission, SDG&E’s climate adaptation team analyzed the latest available climate science to determine the most applicable analysis to inform the internal wildfire risk modeling. Based on this analysis, SDG&E determined the following research was most applicable due to the focus on the increased occurrence of fire weather conditions during the fall months, which represent the highest risk events across San Diego County and Orange County.

“Climate change is increasing the likelihood of extreme autumn wildfire conditions across California” by Michael Goss et al 2020.

Below is a link to the full scientific paper.

<https://iopscience.iop.org/article/10.1088/1748-9326/ab83a7>

5. **Future improvements to initiative—include known future plans (beyond the current year) and new/novel strategies the utility may implement in the next five years (e.g., references to and strategies from pilot projects and research detailed in Section 4.4):** Regarding future improvements, SDG&E will continue to engage with the scientific community in the development and enhancement of climate science and the impacts on wildfire risk. Specifically, SDG&E remains engaged with the climate analysis being conducted by research teams funded by the California Energy Commission to develop the next California Climate Assessment.

b) As described in the response above, SDG&E incorporates climate trends directly into the WiNGS Planning risk model via probability of ignition and the consequence of a potential wildfire, which is further described in section 4.2 and sections 4.5.1.7. It should be noted that the WiNGS Ops model is intended to look at current and short-term forecasted weather conditions, and not long-term climate trends.

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QUESTION 2:

Regarding Projected Changes to PSPS Impact (Section 8.3):

- a. Section 8.3 “Projected changes to PSPS impact” (2022 SDG&E WMP Update p. 364) doesn’t directly answer the question posed in the Guidelines Template (ps. 81-82). Indicate where in the WMP Update (section and page number) this description is provided, or provide these details as follows:

Describe utility-wide plan to reduce scale, scope and frequency of PSPS for each of the following time periods, highlighting changes since the prior WMP report and including key program targets used to track progress over time:

1. By June 1 of current year
2. By September 1 of current year
3. By next WMP submission

See ps. 81-82 of the 2022 Wildfire Mitigation Plan Update Guidelines Template for more information.

RESPONSE 2:

SDG&E plans to reduce the scope, scale and frequency of PSPS events in 2022 through customer resiliency and microgrid programs, the PSPS sectionalizing enhancement program, and strategic undergrounding (see section 7.3.3.8 Grid topology improvements to mitigate or reduce PSPS events, section 7.3.3.11 Mitigation of impact on customers and other residents affected during PSPS events, and section 7.3.3.16 Undergrounding of electric lines and/or equipment). Though SDG&E does not anticipate having any PSPS events by June 1, 2022, it is projected that 4,526 customers could be saved should the need for a PSPS event occur. By September 1, 2022, it is projected that 9,149 customers could be saved from PSPS impacts. And by year-end 2022, it is projected that 11,695 customers could be saved from PSPS impacts. See Table 8-4: Projected PSPS Reduced Impacts (p. 365) for projected program goals and comparison to prior year-end results.

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QUESTION 3:

Regarding expulsion fuses:

- a. Please provide SDG&E's timeline for replacing the remaining Tier 2 and Tier 3 expulsion fuses, broken down by replacements completed per year.

RESPONSE 3:

SDG&E will complete the replacement of all remaining Tier 2 and Tier 3 expulsion fuses, totaling approximately 286 fuse replacements, in 2022. Of the 286 fuse replacements currently scoped, 231 are Tier 2 and 55 are Tier 3.

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QUESTION 4:

Regarding Attachment B Table 7.1: Key recent and projected drivers of risk events:

- a. As shown in Row 14, why does SDG&E predict an increase in wire down events from splice damage or failure in 2023?
- b. What is covered in the “Other” category in Rows 20, 39, 65, and 91?
- c. What is the cause for the increase in 2021 for “Other” outage causes as seen in Row 65?

RESPONSE 4:

- a. This is a data entry error. SDG&E has no wire down events from splice damage or failure in the previous seven years and does not forecast any in 2023.
- b. The “Other” category in rows 20, 39, 65, and 91 include the following SDG&E defined cause codes:

Row	Driver	Cause Codes
20	Wire Down due to Equipment/Facility Failure - Other Distribution	<ul style="list-style-type: none">• “Weather Related” cause code related to a wire down and the "Damaged Device" field from reliability data is null or not listed as a driver, such as fuse or cutout• “Wire Down” cause code when the “Damaged Device” field from reliability data is null or not listed as a driver, such as fuse or cutout
65	Outage due to Equipment/Facility Failure – Other Distribution	<ul style="list-style-type: none">• “Weather Related” cause code and the "Damaged Device" field from reliability data is null or not listed as a driver, such as circuit breaker• “Wire Down” cause code when the “Damaged Device” field from reliability data is null or not listed as a driver, such as circuit breaker
39	Wire Down Event – Equipment/Facility Failure - Other Transmission	<ul style="list-style-type: none">• “6020-Conductor” cause code but notes of the outage state the origin of the fault was something else such as static wire

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91	Outage – Equipment/Facility Failure - Other Transmission	<ul style="list-style-type: none">• “6999 - Other Transmission Equipment” cause code which can include items such as computer malfunction
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- c. SDG&E experienced severe weather events in Q3 and Q4 of 2021. The “Lightning Arrester/Transformer Failure (Weather Related)” cause code saw an increase during these events leading to the increased outages during this period.

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QUESTION 5:

Regarding equipment failures at the distribution level:

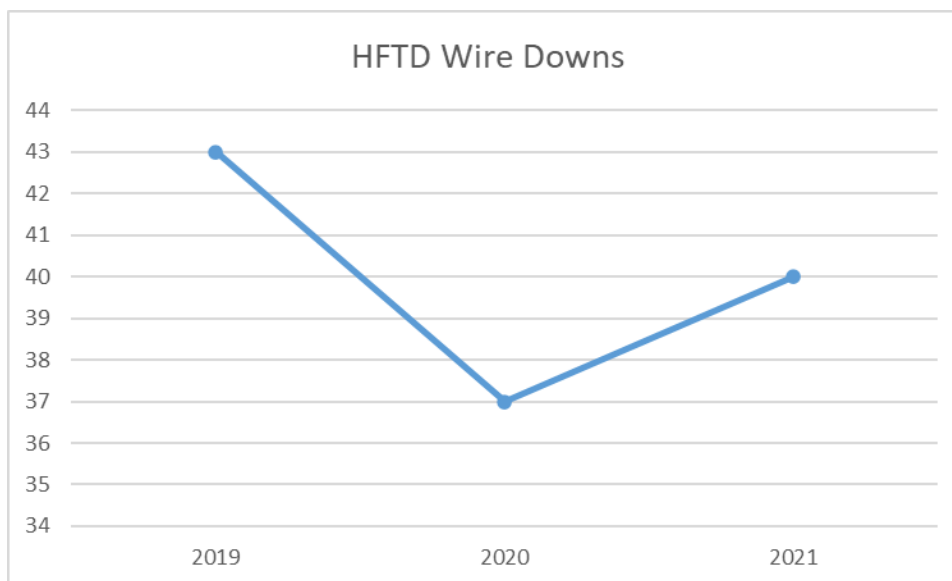
a. How is SDG&E planning on addressing the wildfire risk presented by the following equipment failures at the distribution level, which showed increase wire down and/or outage events in 2021?

i. Describe any root cause analyses evaluating the cause for the increases in 2021 and any associated changes in maintenance or inspections from lesson learned in 2021:

- (1) Connectors/connection devices
- (2) Capacitor banks
- (3) Lightning arrestors
- (4) Crossarms
- (5) Transformers

RESPONSE 5:

i. SDG&E has been reviewing the wire down data and has noted the increase in 2021 over 2020. When looking at only HFTD wire-downs, which include the areas of highest fire risk and where the WMP mitigations take place, SDG&E has shown a downward trend since the implementation of its WMP in 2019. SDG&E has an Electric Risk Assessment team that meets monthly to review wire down events and corrective actions across the service territory. Through this team and the WMP, SDG&E will continue to monitor its performance in this area and analyze where improvement is needed.



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To reduce the number of wire down events in future years, SDG&E will continue to implement the grid hardening and inspection mitigations that reduce the risk of wire downs across the stated drivers including:

- (1) Connectors/connection devices - Hot Line Clamp Replacements (7.3.3.10), Distribution Overhead Hardening (7.3.3.17.1), Covered Conductor (7.3.3.3), Undergrounding (7.3.3.16), Detailed Inspections (7.3.4.1), HFTD Tier 3 Inspections (7.3.4.9.1), and Drone Inspections (7.3.4.9.2)
- (2) Capacitor banks - Capacitor Replacements (7.3.3.1), Distribution Overhead Hardening (7.3.3.17.1), Covered Conductor (7.3.3.3), Undergrounding (7.3.3.16), Detailed Inspections (7.3.4.1), HFTD Tier 3 Inspections (7.3.4.9.1), and Drone Inspections (7.3.4.9.2)
- (3) Lightning arrestors - Lightning Arrester Replacements (7.3.3.18.2), Distribution Overhead Hardening (7.3.3.17.1), Covered Conductor (7.3.3.3), Undergrounding (7.3.3.16), Detailed Inspections (7.3.4.1), HFTD Tier 3 Inspections (7.3.4.9.1), and Drone Inspections (7.3.4.9.2)
- (4) Crossarms - Distribution Overhead Hardening (7.3.3.17.1), Covered Conductor (7.3.3.3), Undergrounding (7.3.3.16), Detailed Inspections (7.3.4.1), HFTD Tier 3 Inspections (7.3.4.9.1), and Drone Inspections (7.3.4.9.2)
- (5) Transformers - Distribution Overhead Hardening (7.3.3.17.1), Covered Conductor (7.3.3.3), Undergrounding (7.3.3.16), Detailed Inspections (7.3.4.1), HFTD Tier 3 Inspections (7.3.4.9.1), and Drone Inspections (7.3.4.9.2)

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QUESTION 6:

Regarding insulators and brushings at the transmission level:

a. How is SDG&E planning on addressing the wildfire risk presented by insulators and brushings at the transmission level, which showed increase wire down and/or outage events in 2021?

i. Describe any root cause analyses evaluating the cause for the increases in 2021 and any associated changes in maintenance or inspections from lesson learned in 2021.

RESPONSE 6:

As noted in row 10.d of Table 7.1, SDG&E has reported 0 wire down events in 2021 caused by insulator damage or failure. In response to the increase in transmission outages caused by insulators and bushings in 2021, noted in row 26.g of Table 7.1, the cause of all 2021 outages were directly related to lightning strikes on the conductor or insulator. Although lightning was the cause of the outages noted in row 26.g, the data set was identified as insulator based on where on the structure the damage was identified or traced to.

SDG&E transmission patrollers perform a fault patrol after each outage events to identify the location, determine the cause, and assess the conditions of the structure. These assessments determine if repairs are necessary and the urgency of these repairs when required. Damage due to lightning in 2021 did not require urgent repairs in any of the instances and lines were often placed back in service within minutes after reviewing vegetation and meteorological conditions in the area. As all damage was associated with lightning strikes, no new maintenance or inspection procedures have been put in place. SDG&E currently proactively identifies transmission insulator maintenance concerns through annual visual patrols, annual infrared patrols, detailed patrols on a three-year cycle, fault patrols, and drone assessments. SDG&E may also patrol lines after storm events to evaluate the condition of the lines and static wires where present. However, due to two suspension clamp failures in 2019, SDG&E is proactively replacing all insulators and associated hardware at 166 structures on Transmission Lines 23001 and 23004 in 2022.

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END OF REQUEST