

OEIS DATA REQUEST: OEIS-P-WMP_2025-SDGE-16
SDG&E RESPONSE

Date Received: 08-24-2025
Date Submitted: 08-27-2025

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

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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 Prioritization of Grid Hardening Activities:

a. SDG&E stated on page 62 of its 2026-2028 WMP R1 that OEIS Table 5-5 “shows the top 5 percent by count of circuit segments with the highest Overall Utility Risk as determined by the latest version of WiNGS Planning and is ranked by Overall Utility Risk per mile.”

i. Provide a detailed explanation of what SDG&E means by “top 5 percent by count of circuit segments” in this context.

b. SDG&E stated on page 3 of its reply comments, “The hardening miles planned in the 2026-2028 WMP cycle were scoped in 2022 and 2023 utilizing a different risk assessment methodology and previous versions of risk models – specifically, risk-spend efficiencies and WiNGS-Planning versions 2.0 and 3.0, respectively.” However, SDG&E provided its circuit segments with their WiNGS 3.0 risk ranking in response to Data Request OEIS-P- WMP_2025-SDGE-15 Question 4 and only 1 circuit in the top 20 risk ranked circuits has any hardening planned during the 2026-2028 WMP Cycle (specifically, Circuit 358-682F has undergrounding planned for 2028).

i. Provide a detailed explanation of why the highest risk ranked circuits ranking from WiNGS 3.0 does not align with the circuits selected for grid hardening activities.

c. SDG&E provided an Excel sheet titled “SDGE Response OEIS-P-WMP_2025-SDGE-15_Q4” in response to Data Request OEIS-P- WMP_2025-SDGE-15 which identifies 26 circuits with Covered Conductor and Undergrounding planned between 2026-2028. Comparing this list of circuits with planned hardening, to the circuits ranked by highest overall by risk by WiNGS-Planning 3.0 or by WiNGS 4.0, only 1 circuit of the riskiest 20 circuits on SDG&E’s system has any Covered Conductor or Undergrounding planned (specifically, Circuit 358-682F). It is unclear how SDG&E uses its risk ranking to inform its grid hardening project selection.

i. Provide a detailed explanation of why the majority of SDG&E’s riskiest circuits, ranked by WiNGS 3.0 or WiNGS 4.0, have no grid hardening planned from 2026-2028.

RESPONSE 1

a. OEIS Table 5-5 contains 261 segments, which is 5% of the total 5,219 segments in SDG&E’s service territory. The 261 segments are ranked by Overall Utility Risk per mile.

b. It is vital to understand reported metrics clearly to avoid misinterpretations that lead to incorrect conclusions. Q1.b appears to confuse *circuit* ranking with *circuit-segment* ranking. Q1.b asks for an explanation as to “why the highest risk ranked *circuits ranking* from WiNGS 3.0 does not align with the circuits selected for grid hardening activities”, referring to the excel sheet provided in response to OEIS-P- WMP_2025-SDGE-15 Q4. What was provided in OEIS-P- WMP_2025-SDGE-15 Q4, however, was *circuit-segment* risk rankings, not *circuit*

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risk rankings. These two grid subsection terms are vastly different in size and scope and do not represent the same risk assessment rankings.

SDG&E's selection of circuit segments for hardening in 2026–2028 is grounded in a data-driven approach and aligns with both prior and current iterations of its wildfire risk models. The 50 miles of Strategic Undergrounding planned for 2028 are among the highest-risk segments identified—ranking in the top 2.4% in the WiNGS 2.0 model, the top 3.8% in WiNGS 3.0, and the top 2.5% in the current WiNGS 4.0 model. This selection is not only consistent with the utility's risk prioritization framework but also delivers nearly equivalent system-wide risk reduction as would be achieved by undergrounding the top two highest-risk segments. Limiting the evaluation to only the top 20 highest-risk segments - representing just 0.4% of total circuit miles - does not provide a representative or comprehensive view of risk mitigation. Such a narrow focus overlooks the broader risk reduction benefits achieved through a more strategic and system-wide approach. SDG&E's methodology ensures that selected segments utilize a cost-effective approach to optimize risk reduction while maintaining alignment with regulatory expectations and model outputs.

Additionally, evaluating only the top 20 WiNGS 3.0 highest-risk segments scoped for 2026–2028 overlooks critical mitigation work already underway in the current 2023–2025 WMP cycle. 10 of the top 20 segments from WiNGS 3.0 either have been or are actively being addressed with undergrounding and covered conductor in the current cycle. While some of these segments remain among the top 20 high-risk segments in the current WiNGS 4.0 model, this is partly the effect of the mitigation work still being in progress, thus the full segment has not yet been completely hardened. However, the respective mitigation's effectiveness is evident when comparing the risk-ranking from WiNGS 3.0 with that of WiNGS 4.0. This underscores the importance of understanding and managing wildfire risk reduction as a long-term, multi-year, cumulative effort rather than isolating planning and analysis to a single planning period.

Further, and as discussed in reply comments to MGRA, it is important to understand that there are several factors *beyond the risk rank* of circuit segments that influence segment mitigation prioritization. The risk ranking of circuit segments is only one of many factors considered when determining optimized, cost-effective strategies for achieving wildfire and PSPS risk reduction. SDG&E strategically leverages additional factors such as projected installation costs, lifecycle costs, expected risk reduction achieved, cost-benefit ratio (CBR) - formerly risk-spend efficiency (RSE) - values, engineering desktop feasibility, and bundling efficiencies to support an optimized, cost-effective prioritization.

All this to say, it is not the risk rank alone that determines grid hardening project selection, as that approach would *not* yield a cost-effective and optimal risk reduction strategy. Rather, the

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risk rank of any given segment, the selected mitigation's effectiveness, and the cost to implement are all factors in the CBR calculation. The CBR is then used to inform *mitigation selection* (i.e. undergrounding or covered conductor). Mitigation *prioritization* of segments then follows *mitigation selection* and depends on engineering analysis to determine feasibility given certain constraints (such as time and funding) and finding efficiencies to optimize planning and construction resources (from engineering and design through crew mobilization). Section 6 of SDG&E's 2026-2028 WMP R1¹ describes the selection and prioritization process in detail and Figure 6-4 depicts this process.²

For example, circuit 1030 has three segments that are currently ranked among the top 21 riskiest segments in WiNGS 4.0, and the CBRs for all three suggest undergrounding. Two out of the three segments were ranked much lower in WiNGS 2.0 (ranked 131 and 159) and slightly lower in WiNGS 3.0 (ranked 41 and 44). Due, in part, to lower risk rank, the two lower ranked segments were not initially selected, nor prioritized, for mitigation in WiNGS 2.0. This scenario impacts the third, high ranked segment. The circuit configuration of the three segments dictates that the optimal hardening strategy, to maximize risk reduction benefit for both wildfire and PSPS, is to consider the same mitigation for all three and prioritize them as a 'bundle' instead of individual projects. It would neither be cost-effective nor prudent to design, engineer, and construct these three segments separately from each other and based solely on risk rank. Doing so would make many phases of the projects redundant – doubling, maybe tripling time and costs related to engineering and design, land/environmental permitting, and civil and electrical construction and crew mobilization. In WiNGS 3.0 and 4.0, however, all three segments were *selected* for undergrounding, which commenced the *prioritization* process. As such, these three now high ranked segments are currently scoped for undergrounding in 2029 and beyond. Furthermore, SDG&E has undergrounded 45.25 miles spanning multiple high risk segments on circuit 1030 to date, and the remaining segments represent only part of a much larger and complex scope of hardening work that must be considered holistically, not isolated to specific segments in a single planning period.

SDG&E respectfully reiterates that the inability to include the remainder of the top 0.4% of highest-risk segments (i.e., the top 20) in the 2026–2028 WMP cycle is largely a consequence of the 2024 GRC Decision, which significantly reduced the scope of authorized hardening work through 2027. Had the requested scope been approved, SDG&E would have completed approximately 575 miles of undergrounding between 2024–2027, many of which were among the highest-risk segments identified in earlier model versions. The fact that only one of the remaining unhardened segments in the top 20 WiNGS 3.0 ranked segments is planned for hardening in 2028 is a consequence of mitigating fewer miles, not a consequence of poor prioritization. The larger scope would have enabled SDG&E to incorporate newly identified

¹ SDG&E 2026-2028 WMP R1 at 85

² SDG&E 2026-2028 WMP R1 at 108

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high-risk segments from WiNGS 4.0 into the 2028 plan. In short, the volume of work originally proposed would have allowed for a more comprehensive and timely mitigation of the highest-risk segments, eliminating the current challenge of addressing evolving high-risk segments within a constrained planning period such as the WMP cycle.

The reduced GRC authorized amounts has also limited segment prioritization to shorter segments with fewer miles. Scoping a longer segment higher in risk ranking with a lot of miles increases the potential of not achieving the total risk reduction and/or exceeding the authorized GRC spend. The potential for permitting, easement acquisition, and construction challenges increases with the number of miles targeted for each segment. Additionally, mitigating only part of a segment does not achieve the total risk reduction.

Given the considerations outlined above, SDG&E is actively reevaluating its hardening strategy for 2028 and beyond. As part of this effort, submittal of a long-term Electric Undergrounding Plan (EUP) under Senate Bill 884 is being considered. As noted in its reply comments, “scoping for 2028 could increase beyond the currently scoped 50 miles of undergrounding and 30 miles of covered conductor.”³ Where prudent and cost-effective, and consistent with the risk prioritization framework discussed, SDG&E intends to mitigate additional high-risk segments. This approach reflects a commitment to maximizing wildfire risk reduction within the constraints of available funding and regulatory guidance.

- c. As corrected in Q1a, a similar misnaming of what is called out as a *circuit* is present in the wording of Q1c. Namely, every mention of *circuit* in Q1c should instead be *circuit-segment* or *segment*, which is the correct reference to what was provided in SDGE’s response to OEIS-P-WMP_2025-SDGE-15 Q4. Circuit aggregated risk rankings or scores were not provided in the response to OEIS-P-WMP_2025-SDGE-15 Q4.

Please see response for Q1b that encompasses the response for both Q1b and Q1c.

³ Reply Comments of San Diego Gas & Electric Company on its 2026-2028 Wildfire Mitigation Plan R1 at 3

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QUESTION 2

Regarding Evidence of Heat Events:

With regards to SDG&E's response to Question 5 of Data Request OEIS-P-WMP_2025-SDGE-15:

- a. Confirm if all instances of the listed risk drivers always entail observed arcing, charring and/or ignition (and therefore are always classified as evidence of heat), or if SDG&E assumes that arcing, charring, and/or ignition always occurs for the listed risk driver.
 - i. Clarify if SDG&E excludes events with the listed risk drivers that did not result in observed arcing, charring, and/or ignition in its count of evidence of heat events.
 - ii. If SDG&E does not exclude events where no arcing, charring and/or ignition is observed, explain why.
- b. For the 90 "Fire caused by Non-SDG&E equipment" events, provide the rationale for including these events.
- c. Given the large count of transformer-related evidence of heat events, state whether these events occurred on previously hardened equipment or on older transformers. Provide a breakdown of the 308 transformer-related CPUC-reportable ignitions and evidence of heat events by asset age: ≤ 5 years, $>5-10$ years, $>10-15$ years, $>15-20$ years, and >20 years.
- d. Provide a breakdown of the 47 "Equipment – Non-Conductor" events by proximate cause: SDG&E personnel, non-SDG&E personnel, customers, and foreign objects (excluding animals, balloons, vegetation, and vehicles).

RESPONSE 2

- A) Evidence of Heat refers to observed signs of arcing, charring, or ignition associated with electric assets. These indicators—such as char marks on cross arms—may not always meet the criteria for a CPUC-reportable ignition but can suggest a potential ignition risk. These events reflect conditions where heat was sufficient to potentially cause an ignition. However, due to certain mitigating factors—such as environmental conditions, asset configuration, or operational response—an actual ignition may not have occurred.
 - a.i) An event qualifies as an Evidence of Heat incident if it involves any electric asset and includes observable signs of arcing, charring, or ignition—regardless of whether an outage occurred. Events that do not exhibit these specific indicators are not classified as Evidence of Heat and are therefore excluded from the analyses.
 - a.ii) See response a.i above

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B) The 90 events categorized as “Fire Caused by Non-SDG&E Equipment” were included in the Evidence of Heat dataset to ensure comprehensive identification and documentation of potential OEIS-reportable events (per OEIS Form 29300) that impacted SDG&E infrastructure. These events were initially flagged due to observed signs of arcing, charring, or ignition near or involving SDG&E assets. Upon investigation, SDG&E determined that the cause of ignition was attributable to non-SDG&E equipment. While SDG&E infrastructure was not the source of the failure, these events were documented to maintain transparency, support situational awareness, and ensure that all relevant ignition risks—regardless of origin—are captured and assessed. This classification also affirms that SDG&E infrastructure was evaluated and ruled out as the cause of the incident.

C) Of the transformer-related Evidence of Heat events, only one occurred on a previously hardened system. All remaining events were associated with non-hardened infrastructure.

Year Bucket	Evidence of Heat
<=5	48
5-10 yrs	26
10-15 yrs	37
15-20 yrs	19
>20 yrs	47
Data Not Available ⁴	27
Inaccurate Record ⁵	104
Total	308

D) Non-Conductor driver events are those in which the primary cause of failure is attributed to non-conductor equipment. These events are strictly limited to instances where the failure originates from the non-conductor asset itself.

Events involving equipment failure due to external or proximate causes—such as contact from balloons, vehicles, or vegetation—are not included under the Non-Conductor driver. Instead, such events are categorized under their respective proximate drivers to ensure accurate attribution and analysis.

⁴ SDG&E has identified that certain transformers associated with Evidence of Heat events are not currently available in the GIS system.

⁵ SDG&E has identified discrepancies in the GIS-recorded installation dates for certain transformers. Preliminary review indicates that some install dates may have been inaccurately captured. SDG&E is actively investigating this issue to determine the root cause and assess the extent of the data inconsistencies.

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QUESTION 3

Regarding FCP, EFD and top 20 Riskiest Circuits:

- a. Provide the percentage coverage of Falling Conductor Protection (FCP) on SDG&E's top 20 riskiest circuits as identified in OEIS Table 6-1.
- b. Provide the percentage coverage of FCP on SDG&E's top 20 riskiest circuits as identified in OEIS Table 5-5.
- c. Provide the percentage coverage of SDG&E's Early Fault Detection (EFD) program on its top 20 riskiest circuits as identified in OEIS Table 6-1.
- d. Provide the percentage coverage of the EFD program on SDG&E's top 20 riskiest circuits as identified in OEIS Table 5-5.

RESPONSE 3

For subsection a. through d., see attached spreadsheet titled "SDGE Response OEIS-P-WMP_2025-SDGE-16 Q3.xlsx."

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