



**Southern California Gas Company and  
San Diego Gas & Electric Company 2024 GRC**

**A.22-05-015/A.22-05-016**

**Track 3 (Reasonableness Review of 2023 Wildfire Mitigation Costs)**

**TURN CROSS-EXAMINATION EXHIBIT**

**TURN-3-E**

TURN Track 3 DR Set 3 Excerpts

**Data Request Number:** TURN-SEU-003

**Proceeding Name:** A2205015\_016-SoCalGas and SDGE 2024 GRC\_Track 3

**Publish To:** The Utility Reform Network

**Date Received:** 09/09/25

**Date Responded:** 9/24/25

**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.

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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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- 1) Chapter 2 of the Track 3 direct testimony refers to wildfire mitigation capital expenditures that were described as part of SDG&E's Track 2 request, but were not included in the Track 2 requested revenue requirement because they were not in service as of December 31, 2022 (page JG-9).
  - a) Please state the amount of capital expenditures that were described as part of SDG&E's Track 2 request but not in service as of December 31, 2022.

**SDG&E Response 1.a:**

SDG&E objects to the request to the extent it is vague and ambiguous, specifically with respect to the use of the term "described." Subject to and without waiving the foregoing, SDG&E responds as follows:

Mr. Woldemariam's Track 2 testimony provided total WMP related capital expenditures incurred through 2022, consistent with the approach and reporting in SDG&E's Risk Spend Accountability Report and Wildfire Mitigation Plan reporting. As some of these capital expenditures were related to capital projects not yet in service as of December 31, 2022, they were not included in the calculation of the Track 2 requested revenue requirement.

The amount of capital expenditures described in Mr. Woldemariam's Track 2 testimony but not placed in service as of December 31, 2022 was \$501 million. This amount was recorded in Construction Work in Process (CWIP) as of December 31, 2022 and was thus not recorded to the WMPMA as of that date or included in SDG&E's Track 2 requested revenue requirement. Subsequently, \$233 million was placed into service in support of SDG&E's 2023 WMP initiatives, and is included in the revenue requirement for SDG&E's Track 3 Filing.

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- 1) Chapter 2 of the Track 3 direct testimony refers to wildfire mitigation capital expenditures that were described as part of SDG&E’s Track 2 request, but were not included in the Track 2 requested revenue requirement because they were not in service as of December 31, 2022 (page JG-9).
- b) Please identify the amount of revenue requirement for each year from 2023 through 2027 that is associated with the capital expenditures that were described as part of SDG&E’s Track 2 request but not in service as of December 31, 2022.

**SDG&E Response 1.b:**

SDG&E objects to the request to the extent it is vague and ambiguous, specifically with respect to the use of the term “described.” Subject to and without waiving the foregoing, SDG&E responds as follows:

As explained in response to Question 1.a, Mr. Woldemariam’s Track 2 testimony provided total WMP related capital expenditures incurred through 2022, consistent with the approach and reporting in SDG&E’s Risk Spend Accountability Report and Wildfire Mitigation Plan reporting. As some of these capital expenditures were related to capital projects not yet in service as of December 31, 2022, they were not included in the calculation of the Track 2 requested revenue requirement.

The revenue requirement associated with the capital expenditures identified in response 1.a. would start once those assets are placed in service, and is calculated as follows.

<b>WMP - Electric (in millions)</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>Total</b>
Depreciation	4.7	14.2	15.3	15.3	15.3	64.7
Return	6.3	14.9	13.8	12.6	11.4	58.9
Income Tax on Return	2.1	5.9	6.3	6.1	5.8	26.2
Property Taxes	-	1.8	3.5	3.5	3.2	12.1
<b>Total Capital Related Costs</b>	<b>13.0</b>	<b>36.8</b>	<b>38.8</b>	<b>37.5</b>	<b>35.7</b>	<b>161.8</b>

<b>WMP – Gas (in millions)</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>Total</b>
Depreciation	0.4	1.4	1.4	1.4	1.4	5.9
Return	0.3	0.6	0.5	0.4	0.3	2.0
Income Tax on Return	0.1	0.5	0.5	0.5	0.5	2.1
Property Taxes	-	0.1	0.1	0.1	0.1	0.4
<b>Total Capital Related Costs</b>	<b>0.8</b>	<b>2.6</b>	<b>2.5</b>	<b>2.3</b>	<b>2.2</b>	<b>10.3</b>

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4. In the 2023-2025 Wildfire Mitigation Plan included as Appendix 1 to Chapter 1 of SDG&E's Track 3 testimony, Table 6-7 at page 78 states that one of the "basic settings" for the WiNGS-Planning Visualization Application was the parameter "Applied RSE threshold." In addition, section 7.1.4.2.2 Identification of Mitigation Initiatives refers to "RSE thresholds for mitigation considerations" as an element that is part of the WiNGS-Planning model (page 110).
  - a) Please identify by page number each place in Chapter 1 (including Appendix 1) where the term "RSE threshold" is defined or further explained or discussed.

**SDG&E Response 4.a:**

SDG&E objects to the request to the extent it is unduly burdensome and calls for SDG&E to search publicly available records that are equally accessible to TURN, including the testimony and appendices previously submitted to TURN. Subject to and without waiving the foregoing objections, SDG&E responds as follows:

The term "RSE threshold" appears three times in SDG&E's 2023–2025 Wildfire Mitigation Plan, once in Table 6-7 (page 78) and twice in Section 7.1.4.2.2 (page 115). While the term is not defined as a fixed numeric value, it is used as an adjustable input within the WiNGS-Planning model. In this model, the RSE value can be adjusted to different levels, which helps evaluate a range of mitigation strategies. As explained in Section 7.1.4.2.2 of SDG&E's 2023-2025 WMP, adjusting factors like risk reduction goals, total scenario costs, and RSE thresholds allows SDG&E to evaluate different approaches across all circuit segments. RSE thresholds were used to compare options such as installing covered conductor, undergrounding lines, or taking no action, to appropriately balance risk reduction with cost. Adjusting RSE thresholds also aided in performing sensitivity analyses to understand if and how changes to inputs affected the recommended mitigation strategy, and to what extent.

SDG&E notes, however, that the description of SDG&E's WiNGS Planning model addresses updates to the model incorporated into WiNGS 2.0 and 3.0. Due to the timeframes for scoping and planning grid hardening projects such as undergrounding and covered conductor, which are typically in excess of 1-2 years, the covered conductor and undergrounding work performed in 2023—and sought for recovery in SDG&E's Track 3 submission—was scoped using prior versions of the WiNGS Planning and/or WRRM models. These models were described in SDG&E's 2021 WMP.

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- 4) In the 2023-2025 Wildfire Mitigation Plan included as Appendix 1 to Chapter 1 of SDG&E’s Track 3 testimony, Table 6-7 at page 78 states that one of the “basic settings” for the WiNGS-Planning Visualization Application was the parameter “Applied RSE threshold.” In addition, section 7.1.4.2.2 Identification of Mitigation Initiatives refers to “RSE thresholds for mitigation considerations” as an element that is part of the WiNGS-Planning model (page 110).
- b) Please briefly explain how SDG&E calculated or developed the RSE threshold that was used in SDG&E’s evaluation of the system hardening initiatives’ capital expenditures that are the subject of its Track 3 request. The explanation should include, at a minimum, responses to each of the following questions:
- i) Was there a single RSE threshold figure that was used to evaluate all system hardening initiatives for which the WiNGS-Planning model was used, or was a different RSE threshold figure developed for different initiatives such as Covered Conductor Installation and Strategic Undergrounding?
  - ii) For each initiative for which the WiNGS-Planning model was used, was a single RSE threshold figure used for the evaluation or were different threshold figures calculated for different subparts of the initiative? If different RSE threshold figures were used, were they developed at the circuit-based level, at an asset-based level, or at some other level?

**SDG&E Response 4.b:**

SDG&E objects to the request to the extent it is unduly burdensome and calls for SDG&E to search publicly available records that are equally accessible to TURN, including the testimony and appendices previously submitted to TURN. Subject to and without waiving the foregoing objections, SDG&E responds as follows:

As stated in the prior response, SDG&E notes that the description of SDG&E’s WiNGS Planning model in its 2023-2025 WMP addresses updates to the model incorporated into WiNGS 2.0 and 3.0. Due to the timeframes for scoping and planning grid hardening projects such as undergrounding and covered conductor, which are typically in excess of 1-2 years, the covered conductor and undergrounding work performed in 2023—and sought for recovery in SDG&E’s Track 3 submission—was scoped using prior versions of the WiNGS Planning and/or WRRM models. These models were described in SDG&E’s 2021 WMP.

The selection of an RSE threshold was informed by sensitivity analyses conducted in earlier iterations of the WiNGS-Planning model. SDG&E evaluated (including a study further described below) how varying undergrounding cost estimates and RSE thresholds impacted model outcomes. For example, when undergrounding costs were reduced by

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#### **SDG&E Response 4.b: Continued**

20% and 40%, the wildfire RSE values for undergrounding began to converge with those of covered conductor mitigation. At a 40% cost reduction, the number of segments recommended for undergrounding increased from 61 to 100, demonstrating how cost assumptions directly influence mitigation prioritization.

In parallel, sensitivity testing on the RSE threshold itself, ranging from 2 to 80, allowed SDG&E to assess how different thresholds affected total portfolio cost and wildfire risk reduction. This sensitivity testing revealed that an RSE threshold of 20 yielded an optimal balance between cost-effectiveness and risk reduction, aligning with the utility's objectives and constraints. This threshold enabled the model to recommend mitigation strategies that were both financially viable and impactful in reducing wildfire risk.

To better understand the sensitivity around undergrounding cost estimates and RSE thresholds, various sensitivity analyses were pursued on several iterations of the WiNGS-Planning model to see the effect of changes to these variables within the model.

The below three figures show one such analysis, where the WF RSE values of undergrounding and covered conductor mitigations were assessed for the scope of segments within WiNGS-Planning. The analysis compared current undergrounding cost estimates (left figure) to a 20% cost reduction state (middle figure) and a 40% cost reduction state (right figure). The analysis was done to analyze anticipated cost reduction estimates projected for undergrounding mitigation and how that would affect the model outcome. As seen here, the WF RSE values for the undergrounding mitigation starts to converge to be comparable to the same metric for the covered conductor mitigation option, most notably so at the 40% undergrounding cost reduction state. These foreseeable future states of cost reduction for the undergrounding mitigation would see a resulting increase in the number of segments to be recommended for undergrounding mitigation as opposed to covered conductor, specifically an increase from 61 segments (current costs) to 100 segments (40% reduced cost) in this particular analysis, where applicable per construction feasibility and per the RSE threshold utilized to meet the cost and risk reduction objectives/constraints.

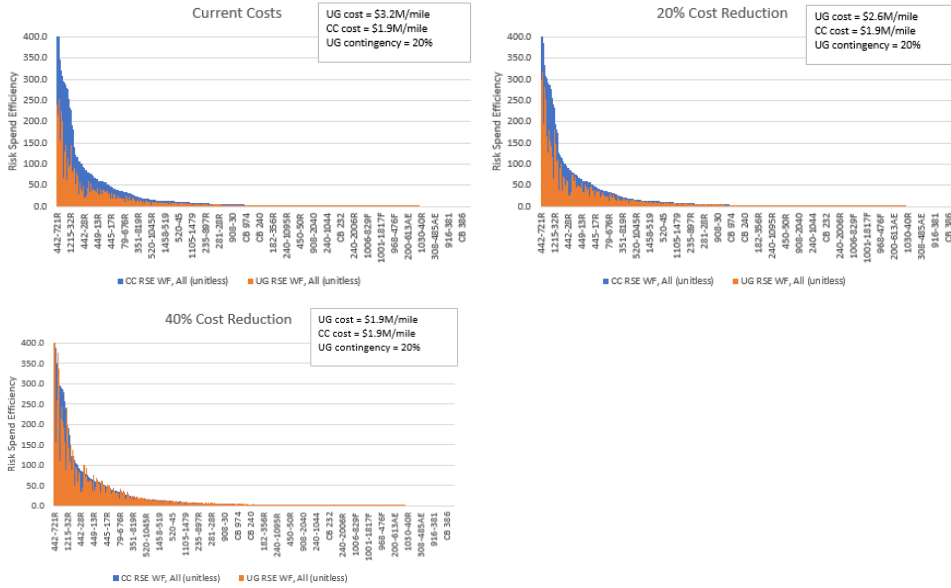
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Sensitivity analysis was also performed on the RSE threshold utilized within WiNGS-Planning to support prioritization and mitigation selection efforts of the model. One such sensitivity was run on the RSE threshold ranging it from 2 to 80, and the relevant resulting metrics, e.g. WF Risk Reduction and Total Portfolio Cost, were calculated accordingly. Objectives and constraints set around risk reduction goals and maximum portfolio costs can be targeted more accurately through the RSE threshold variability as a result of the analysis, in addition to better understanding the correlation between the RSE threshold constraint and the subsequent model outcomes.

RSE Threshold	WF Risk Reduction %	Portfolio Cost (\$k)
2	98.8%	\$11,228,760
4	97.2%	\$8,882,119
6	95.5%	\$7,416,811
8	94.0%	\$6,382,780
10	92.5%	\$5,669,208
12	91.9%	\$5,488,839
14	90.8%	\$5,091,759
16	88.9%	\$4,489,017
18	87.9%	\$4,235,468
20	86.4%	\$3,955,696
22	84.7%	\$3,602,218

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24	82.8%	\$3,186,817
26	81.1%	\$2,879,965
28	80.0%	\$2,681,103
30	78.8%	\$2,454,169
32	78.4%	\$2,383,835
34	78.0%	\$2,344,535
36	77.5%	\$2,307,325
38	76.3%	\$2,145,969
40	75.7%	\$2,109,465
42	75.0%	\$2,056,914
44	74.8%	\$2,036,353
46	74.2%	\$1,974,861
48	73.1%	\$1,892,842
50	72.0%	\$1,816,470
52	71.4%	\$1,779,606
54	71.0%	\$1,753,546
56	70.9%	\$1,740,338
58	70.0%	\$1,671,192
60	69.1%	\$1,621,423
62	68.3%	\$1,572,519
64	68.1%	\$1,565,583
66	67.4%	\$1,537,914
68	66.4%	\$1,478,398
70	66.4%	\$1,478,220
72	64.7%	\$1,365,542
74	63.2%	\$1,293,508
76	62.0%	\$1,253,332
78	60.9%	\$1,210,579
80	60.8%	\$1,208,858

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**SDG&E Response 4.b: Continued**

Section 7.1.4.2.2 of SDG&E's 2023-2025 WMP further discusses how RSE thresholds were used to compare mitigation options, such as covered conductor installation, undergrounding, or no action across all circuit segments. The flexibility of the threshold input allowed SDG&E to tailor its approach based on evolving cost projections, feasibility constraints, and risk reduction goals.

Based on the model outputs, SDG&E utilized a decision tree, which reviewed the segment-specific covered conductor and undergrounding RSE to effectively recommend circuit segment mitigations across the scope of all the circuits-segments considered within the WiNGS-Planning model. This was done by comparing each mitigation's respective RSE score to a single RSE threshold. Both covered conductor and strategic undergrounding mitigations were evaluated for every segment in the portfolio. During this process, SDG&E also considered additional factors outside the model, such as feasibility and environmental constraints, in addition to subject matter expertise to finalize the recommended mitigation. Thus, the RSE was not necessarily the final deciding factor in a hardening decision.

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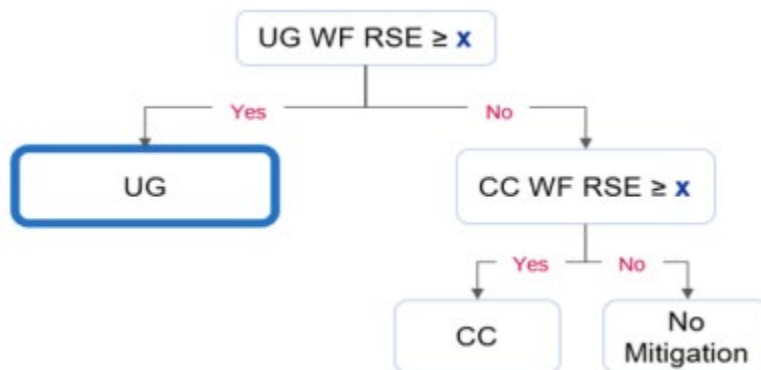
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- c) For each of the 2023 initiatives included in this Track 3 request for which SDG&E relied in whole or in part on the WiNGS-Planning model “to analyze and compare different long-term investment planning portfolios and scenarios” (as described at page 110 of Appendix 1), please identify the RSE threshold or thresholds SDG&E used for such analysis and comparison.

**SDG&E Response 4.c:**

Please see the above response. An RSE threshold of 20 was used to evaluate covered conductor and strategic undergrounding for 2023 work performed. See figure below for a depiction of how the RSE threshold was incorporated into the decision tree framework.

Figure 1 – WiNGS (version 1.0) Decision Tree



Based on the model outputs, SDG&E utilized a decision tree, which reviewed the segment-specific covered conductor and undergrounding RSE to effectively recommend circuit segment mitigations across the scope of all the circuits-segments considered within the WiNGS-Planning model. This was done by comparing each mitigation’s respective RSE score to a single RSE threshold. Both covered conductor and strategic undergrounding mitigations were evaluated for every segment in the portfolio. During

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**SDG&E Response 4.c: Continued**

this process, SDG&E also considered additional factors outside the model, such as feasibility and environmental constraints, in addition to subject matter expertise to finalize the recommended mitigation. Thus, the RSE was not necessarily the final deciding factor in a hardening decision.