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**REBUTTAL TESTIMONY OF
TRAVIS SERA AND AVIDEH RAZAVI
(GAS INTEGRITY MANAGEMENT PROGRAMS)**

ERRATA

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



June 2023

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(GAS INTEGRITY MANAGEMENT PROGRAMS)**

I. SUMMARY OF DIFFERENCES

TOTAL O&M - Constant 2021 (\$000)			
	Base Year 2021	Test Year 2024	Change
SDG&E	11,026	12,768	1,742
CAL ADVOCATES	11,026	12,768	1,742
TURN-SCGC	11,026	12,768	1,742
TURN ¹	11,026	9,668	(1,358)
EDF ²	-	-	-
CCUE ³	11,026	12,768	1,742

TOTAL CAPITAL - Constant 2021 (\$000)					
	2022	2023	2024	Total	Difference
SDG&E	81,707	86,876	107,125	275,708	0
CAL ADVOCATES	81,707	86,876	107,125	275,708	0
TURN-SCGC	81,707	86,876	107,125	275,708	0
TURN	21,477	22,394	36,446	80,317	(195,391)
EDF ⁴	-	-	-	-	-
CCUE ⁵	81,707	86,876	137,690	306,273	+30,565

¹ The Utility Reform Network (TURN) recommended a reduction of \$3.0 million for VIPP non-shared services, which is greater than SDG&E's proposed \$2.866 million for VIPP. In addition, TURN recommended a reduction of \$0.1 million for FIMP which is less than SDG&E's proposed \$0.258 million for FIMP. While the table reflects TURN's reduction, the correct amount of reduction should be \$2.866 million for VIPP and \$0.258 million for FIMP.

² EDF's testimony makes broader recommendations that would impact SoCalGas and SDG&E requests more globally and as a result are not reflected as specific reductions.

³ The Coalition of California Utility Employees (CCUE) did not dispute SDG&E's O&M activities or forecasts, therefore, the table reflects SDG&E's forecast.

⁴ EDF's testimony makes broader recommendations that would impact SoCalGas and SDG&E requests more globally and as a result are not reflected as specific reductions.

⁵ CCUE did not dispute SDG&E's 2022-2023 capital forecasts, therefore the table reflects SDG&E's forecast.

1 **II. INTRODUCTION**

2 This rebuttal testimony of Travis Sera and Avidah Razavi, which supports the request of
3 San Diego Gas & Electric Company (SDG&E) for Gas Integrity Management Program costs,
4 adopts the direct testimony of Amy Kitson and Travis Sera (Exhibit SDGE-09-R)⁶ and addresses
5 the following testimony from other parties:

- 6 • The Public Advocates Office of the California Public Utilities
7 Commission (Cal Advocates), as submitted by Ms. Chauncey Quam
8 (Exhibit CA-04), dated March 27, 2023.
- 9 • The Utility Reform Network (TURN), as submitted by Mr. Rod Walker
10 (Exhibit TURN-5), dated March 27, 2023.
- 11 • The Utility Reform Network-Southern California Gas Coalition (TURN-
12 SCGC), as submitted by Catherine Yap (Exhibit TURN-SCGC-04
13 Revised) dated April 10, 2023.
- 14 • Environmental Defense Fund (EDF), as submitted by Mr. Michael Colvin,
15 Dr. Richard McCann, and Mr. Joon Hun Seong (Exhibit EDF-01), dated
16 March 27, 2023.
- 17 • The Coalition of California Utility Employees (CCUE), as submitted by
18 Mr. Robert Earle (referred to as Exhibit CCUE), dated March 27, 2023.

19 As a preliminary matter, the absence of a response to any particular issue in this rebuttal
20 testimony does not imply or constitute agreement by SDG&E with the proposal or contention
21 made by these or other parties. The forecasts contained in SDG&E’s direct testimony,
22 performed at the project level, are based on sound estimates of its revenue requirements at the
23 time of testimony preparation.

24 SDG&E’s Gas Integrity Management Programs testimony (Exhibit SDGE-09-R) consists
25 of the Operations and Maintenance (O&M) and capital expenses to manage federally mandated
26 programs that were designed to continually identify and assess risks, remediate conditions that
27 present potential threats to asset integrity, and provide safe and reliable service. These programs
28 are the Transmission Integrity Management Program (TIMP), the Distribution Integrity

⁶ Ex. SDGE-09-R (Revised Prepared Direct Testimony of Amy Kitson and Travis Sera (Gas Integrity Management Programs)), August 2022; see also Ex. SDG&E-09-WP-R and Ex. SDG&E-09-CWP-R (Capital Workpapers to Testimony of Amy Kitson and Travis Sera), August 2022.

1 Management Program (DIMP), and the Gas Safety Enhancement Programs (GSEP).
2 Additionally, the testimony discusses the O&M and capital expenses to manage a newly
3 proposed Facility Integrity Management Program (FIMP). The forecasts were developed based
4 on both historical spending and prudent consideration of best practices and future changes to
5 business processes.

6 SDG&E remains committed to mitigating risks associated with safety, infrastructure
7 integrity, and system reliability, including the implementation of regulatory requirements and
8 best practices across various activities such as program management, data management, and
9 project execution. The forecasts presented in direct testimony support SDG&E's focus on
10 providing safe and reliable service to customers at a reasonable cost. SDG&E requests the
11 California Public Utilities Commission (CPUC or Commission) adopt its Test Year 2024 (TY
12 2024) General Rate Case (GRC) forecast of \$12.768 million for O&M. SDG&E further requests
13 the Commission adopt its forecast for capital expenditures of \$81.707 million in 2022, \$86.876
14 million in 2023, and \$107.125 million in 2024.

15 **A. Cal Advocates**

16 The following is a summary of Cal Advocates' position as it pertains to the Gas Integrity
17 Management Programs:⁷

- 18 • Cal Advocates does not oppose SDG&E's TY 2024 request for
19 TIMP, DIMP, FIMP, and GSEP O&M activities.
- 20 • Cal Advocates does not oppose SDG&E's capital expenditures
21 request for TIMP, DIMP, FIMP, and GSEP.

22 **B. TURN**

23 The following is a summary of TURN's positions as it pertains to the Gas Integrity
24 Management Programs:⁸

- 25 • TURN claims that the Commission should disallow recovery of all
26 investment into accelerated replacements of Aldyl-A under the
27 Vintage Integrity Plastic Plan (VIPPP) or other similar programs;
28 this would decrease capital expenditures by \$60.230 million in

⁷ Ex. CA-04 (Testimony of Chauncey Quam on behalf of Cal Advocates), March 27, 2023.

⁸ Ex. TURN-5 (Prepared Testimony of Rod Walker submitted on behalf of TURN), March 27, 2023.

1 2022, \$64.482 million in 2023, and \$70.534 million in 2024 and
2 would decrease O&M expenses by approximately \$3 million in
3 2024.

- 4 • TURN argues that the Commission should disallow the inception
5 of the FIMP and any activities that are reasonable should be
6 reallocated to another appropriate program (e.g., TIMP); this
7 would reduce the overall capital expenditures by \$2.366 million in
8 2024 and \$15.053 million in 2024 O&M expenses.

9 C. EDF

10 The following is a summary of EDF's position as it pertains to the Gas Integrity
11 Management Programs:⁹

- 12 • EDF claims it is concerned that the capital expenditure under the
13 Gas Integrity Management Programs will amount to *de facto*
14 stealth expansion of the gas system if based on faulty, exaggerated
15 demand and account growth assumptions.
- 16 • EDF contends that, in cases where gas system upgrades are
17 necessary for safety and reliability concerns, SDG&E should be
18 required to demonstrate the need and justification on a project-by-
19 project basis.

20 D. CCUE

21 The following is a summary of CCUE's position as it pertains to the Gas Integrity
22 Management Programs:¹⁰

- 23 • CCUE asserts that SDG&E's 2024 capital forecast for VIPP
24 should be increased by \$30.565 million for a total of \$101.099
25 million.
- 26 • CCUE contends that the Commission should require SDG&E to
27 develop a detailed yearly plan for the replacement of Aldyl-A

⁹ Ex. EDF-01 (Direct Testimony of EDF, Michael Colvin, Richard McCann, Ph.D., and Joon Hun Seong), March 27, 2023.

¹⁰ Ex. CCUE (Prepared Testimony of Robert Earle on behalf of CUE), March 27, 2023.

1 plastic pipe with a focus on pre-1986 and that this plan should
2 include the miles to be replaced per year.

3 **III. REBUTTAL TO PARTIES' O&M PROPOSALS**

4 **A. Non-Shared Services O&M**

5

TOTAL O&M - Constant 2021 (\$000)			
	Base Year 2021	Test Year 2024	Change
SDG&E	11,026	12,768	1,742
CAL ADVOCATES	11,026	12,768	1,742
TURN-SCGC	11,026	12,768	1,742
TURN ¹¹	11,026	9,668	(1,358)
EDF ¹²	-	-	-
CCUE ¹³	11,026	12,768	1,742

6 The following sections respond to parties' positions on the non-shared O&M forecasts for
7 the Gas Integrity Management Programs and confirm SDG&E's projections are supported,
8 reasonable, and should be adopted by the Commission in their entirety.

9 **1. TIMP**

10 Parties did not take issue with SDG&E's TY 2024 O&M forecast for the TIMP. SDG&E
11 recommends the Commission find SDG&E's TIMP forecast reasonable and authorize the
12 continuation of the TIMPBA to record authorized and actual revenue requirement.

¹¹ TURN recommended a reduction of \$3.0 million for VIPP non-shared services, which is greater than SDG&E's proposed \$2.866 million for VIPP. In addition, TURN recommended a reduction of \$0.1 million for FIMP which is less than SDG&E's proposed \$0.258 million for FIMP. (See Ex. CA-04 (Chauncey Quam).) While the table reflects TURN's reduction, the correct amount of reduction should be \$2.866 million for VIPP and \$0.258 million for FIMP.

¹² EDF's testimony makes broader recommendations that would impact SoCalGas and SDG&E requests more globally and as a result are not reflected as specific reductions.

¹³ CCUE did not dispute SDG&E's O&M activities or forecasts, therefore, the table reflects SDG&E's forecast.

1 **2. DIMP**

2 **a. TURN**

3 TURN objects to SDG&E’s VIPP O&M forecast as a byproduct of their objection to the
4 capital replacement activities.¹⁴ Since TURN’s basis for objection relates to capital activities,
5 this is discussed in detail in Section IV.B. of this testimony.

6 **3. FIMP**

7 **a. TURN**

8 TURN disagrees with SDG&E’s proposal for a FIMP, asserting that any work needed
9 under the FIMP should be incorporated in existing integrity management programs or other
10 company programs. TURN also claims that SDG&E has not proven that the FIMP is a best
11 practice, industry standard, or requirement, or that it is necessary.¹⁵ The Commission should
12 reject TURN’s recommended reduction for the following reasons.

13 First, FIMP is modeled after the TIMP and DIMP which are integrity management
14 programs required by regulations to increase safe operation of gas systems. FIMP also
15 incorporates industry recommended practices (e.g., electrical equipment inspections per National
16 Fire Protection Association (NFPA 70B)). Second, TURN, in its recommendation that the FIMP
17 be included in existing integrity management programs, clearly demonstrates a lack of
18 understanding of the drivers that have shaped these programs and the differences between
19 pipeline and facility threats and risks. Existing integrity management programs such as TIMP
20 and DIMP were developed and are based on regulatory requirements. For example, TIMP,
21 which is based on 49 Code of Federal Register (CFR) Part 192, Subpart O, focuses primarily on
22 gas transmission pipeline assessments. DIMP, under 49 CFR Part 192, Subpart P, focuses on gas
23 distribution pipelines. These applicable regulations and corresponding programs do not
24 incorporate integrity-related activities for the types of equipment currently being proposed for
25 inclusion in the FIMP (e.g., pressure vessels, electrical equipment, and other high-pressure
26 facilities such as Natural Gas Vehicle (NGV) fueling stations).

27 TURN also argues that “the Companies’ concerns that this decentralization of efforts will
28 somehow make the activities less effective does not appear reasonable. The activities proposed

¹⁴ Ex. TURN-5 (Rod Walker) at 16.

¹⁵ Id. at 17-18, 90.

1 to be performed under a FIMP involve many different divisions and would need to be
2 coordinated with TIMP, DIMP, Gas Distribution, and other operating divisions of the
3 Companies.”¹⁶ A robust, comprehensive, systematic, and integrated FIMP is essential to
4 confirming that equipment integrity is addressed across multiple departments and would enhance
5 the safety of SDG&E's transmission and NGV facilities. Applying integrity management
6 principles to facilities would enable effective allocation of resources for prevention, detection,
7 and mitigation activities. However, integrity related and data collection activities included in the
8 FIMP would be less effective if decentralized. Planning and managing integrity assessment and
9 remediation activities, along with data and risk management, necessitate trained individuals with
10 multidisciplinary expertise in risk and threat identification, prevention, and mitigation. Data
11 management and integration is necessary for effective threat identification and risk assessment to
12 prioritize integrity management work. In the absence of a centralized program management
13 approach, there is an increased risk of inconsistency and inefficiency.

14 Currently, the TIMP and DIMP are managed under two departments (Integrity
15 Management and Asset Risk and Strategy) and while the departments coordinate with other work
16 groups, the centralized effort enables SDG&E to analyze risks and determine appropriate risk
17 mitigation measures and remediations more expeditiously and cohesively than if the work were
18 scattered throughout the company. Decentralization carries the risk of inconsistent
19 implementation of integrity-related activities and a lack of a consistent strategy to implement and
20 manage multiple integrity management activities across departments.

21 SDG&E justifiably needs a separate FIMP beyond routine operations and maintenance.
22 Current O&M inspections are conducted on an as-needed basis and do not include the activities
23 proposed under the FIMP. For example, routine operations and maintenance activities do not
24 routinely include American Petroleum Institute (API) 510 inspections performed by certified
25 inspectors in the Gas Engineering group. An API 510 inspection evaluates pressure vessels both
26 internally and externally for operational stability, material quality and safety, and the FIMP
27 would expand the existing NDE inspections to address the mechanical integrity of aging fixed
28 equipment located at its facilities.

¹⁶ *Id.* at 92.

1 The FIMP is a centralized and comprehensive approach to enhance the safety of facility
 2 assets by implementing a systematic program. The scheduled inspections and remediations
 3 under the FIMP necessitate additional resources (e.g., FTEs and vehicles) to manage and support
 4 this work. A centralized FIMP team will be better able to analyze asset data for interactive
 5 threats, determine necessary actions and timelines, and manage these safety activities both
 6 comprehensively and consistently across different types of assets and operating divisions. The
 7 FIMP reflects SDG&E’s commitment to safety and the Commission should approve the FIMP to
 8 enable SDG&E to manage the safety of its gas infrastructure more comprehensively.
 9 Additionally, the Commission should authorize a two-way balancing account due to the variable
 10 nature of inspection and remediation activities like those of the TIMP, and because the program
 11 will be in the early phases of development and implementation. A two-way balancing account
 12 will allow flexibility to respond to risks and will also provide ratepayer protection while SDG&E
 13 develops and refines scope, threat identification and risk analysis procedures, and safety
 14 mitigations. The balancing account treatment would be consistent with that of the TIMP and
 15 DIMP, which address important safety, system integrity, and risk management initiatives.

16 **4. GSEP**

17 Parties did not take issue with SDG&E’s TY 2024 O&M forecast for the GSEP. SDG&E
 18 recommends the Commission find SDG&E’s GSEP forecast reasonable and authorize the
 19 GSEPBA to record authorized and actual revenue requirement.

20 **IV. REBUTTAL TO PARTIES’ CAPITAL PROPOSALS**

TOTAL CAPITAL - Constant 2021 (\$000)					
	2022	2023	2024	Total	Difference
SDG&E	81,707	86,876	107,125	275,708	0
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TURN	21,477	22,394	36,446	80,317	(195,391)
EDF ¹⁷	-	-	-	-	-
CCUE ¹⁸	81,707	86,876	137,690	306,273	30,565

¹⁷ EDF’s testimony makes broader recommendations that would impact SoCalGas and SDG&E requests more globally and as a result are not reflected as specific reductions.

¹⁸ CCUE did not dispute SDG&E’s capital activities or forecasts for the years 2022-2023, therefore, the table reflects SDG&E’s forecast.

1 The following sections respond to parties' positions on the capital forecasts for the Gas
2 Integrity Management Programs and confirm SDG&E's projections are supported, reasonable,
3 and should be adopted by the Commission in their entirety.

4 **A. TIMP**

5 Parties did not take issue with SDG&E's capital forecasts for the TIMP. SDG&E
6 recommends the Commission find SDG&E's TIMP forecast reasonable and authorize the
7 continuation of the TIMPBA to record authorized and actual revenue requirement.

8 **B. DIMP**

9 **1. TURN**

10 TURN generally opposes SDG&E's forecast for VIPP activities, which SDG&E
11 proposed to replace vintage plastics that were manufactured by Dupont under the moniker Aldyl-
12 A and installed from 1969 to 1985. TURN states the "proposed accelerated rate of replacements
13 under the VIPP (and associated accelerated recovery) is unsupported by the data" and "the risks
14 of the targets of the VIPP are negligible in comparison with the relative risk of other types of
15 pipe in the SoCalGas and SDG&E systems."¹⁹ TURN utilized data it erroneously claimed was
16 SoCalGas's data²⁰ in an attempt to depict the percentage of system leaks that were found on pre-
17 1986 Aldyl-A, leading to incorrect comparisons of leak counts and leak repair rates. TURN
18 claims that "the relative risk of the targets of the VIPP are negligible in comparison with the
19 other relative risk of other types of pipe in the SoCalGas and SDG&E system" and that "the
20 absolute risk that the targets of the VIPP pose is negligible in and of itself and has not
21 historically represented a significant risk."²¹ As made evident by these corrected values provided
22 in the table below,²² the percentage of leaks on Aldyl-A pipe is not negligible.

	2017	2018	2019	2020	2021
--	-------------	-------------	-------------	-------------	-------------

¹⁹ Ex. TURN-5 (Rod Walker) at 68.

²⁰ The data presented in Table 14 (see Ex. TURN-5 (Rod Walker) at 73) did not belong to SoCalGas and TURN corrected this in their response to SCG-SDGE-TURN-009 to reflect the correct data submitted by SoCalGas for TURN-SEU-023 Q2. (See Appendix B, at 1.) TURN, however, did not use SDG&E's data to discuss SDG&E's VIPP in their testimony.

²¹ Ex. TURN-5 (Rod Walker) at 68.

²² The table utilizes data SDG&E provided to TURN in response to TURN-SEU-023 Q2, and removes leaks related to excavation damage.

Total Aldyl-A leaks (SDG&E)	160	193	191	134	128
Total System leaks (PHMSA)	2964	2968	2620	2781	2687
Aldyl-A % (SDG&E)	5%	7%	7%	5%	5%

1
2 This is further illustrated by an applicable update to the values provided above. Since
3 VIPP is addressing the threats associated with pre-1986 Aldyl-A, all of which are below ground,
4 the comparison should utilize below ground leaks. This also appears to align with the intent of
5 the analysis as Mr. Walker states, “I attempted to graph the percentages of system leaks that were
6 on Aldyl-A vs. all other pipe...”²³ and most above ground leaks occur on meter set assemblies.
7 Since the total system counts utilized by TURN included both above ground and below ground
8 assets, SDG&E eliminated the above ground data from the table below and the percentage of
9 leaks on Aldyl-A noticeably increases.

	2017	2018	2019	2020	2021
Total Aldyl-A leaks (SDG&E)	160	193	191	134	128
Total System Below Ground Leaks	682	686	735	631	637
Total Aldyl-A leaks (SDG&E)	23%	28%	26%	21%	20%

11
12 Although utilizing leak repair information is an important input for assessing risk, leak
13 counts and leak rates alone are insufficient for properly assessing risk. 49 CFR Part 192 Subpart
14 P requires operators to consider both the likelihood of a failure and the potential consequence of
15 such a failure when assessing risk.²⁴ In TURN’s evaluation of “risk,” the potential consequence
16 of a failure was not considered. To determine potential consequence, SDG&E considers
17 historical incidents that have occurred in the service territory as well as across the industry.
18 SDG&E considers the leak information TURN relies upon but also considers numerous
19 additional inputs that assist in the assessment of risk, as further described herein. These analytics

²³ Ex. TURN-5 (Rod Walker) at 73.

²⁴ 49 CFR § 192.1007(c).

1 target higher risk pipelines using quantitative results that enable strategic replacement in lieu of
2 wholesale replacement.

3 SDG&E developed, as part of the DIMP, a segment-specific quantitative risk assessment
4 (QRA) model for medium pressure mains that uses a combination of internal datasets and
5 external publicly available data sources. SDG&E uses this QRA model to estimate safety risk of
6 vintage plastic medium pressure mains, where risk is defined as the product of probability of
7 failure and its associated consequence (i.e., probability of a hazardous leak and resulting life-
8 safety consequence²⁵). PHMSA’s white paper titled “*Pipeline Risk Modeling Overview of
9 Methods and Tools for Improved Implementation*,” published on February 1, 2020,²⁶ describes
10 the merits and limitations of various risk models. PHMSA describes quantitative risk models as
11 robust and able to measure risk in standard units; they provide greater risk insight than relative
12 risk models to support risk-related decision making. SDG&E has leveraged the insights gained
13 from the QRA to evaluate risk of the medium pressure distribution mains and identify necessary
14 vintage plastic pipeline replacements. This approach supports the overall reduction of risk in the
15 pipeline system and increases safety.

16 It is important to note that, in the absence of a safety risk threshold from PHMSA and
17 other regulatory bodies, SDG&E has established that locations along the medium pressure
18 distribution mains system with an annual probability greater than 6×10^{-6} of a serious incident
19 should be targeted for replacement. Vintage plastic medium pressure mains with QRA results
20 that exceed this threshold are targeted for replacement under the VIPP. SDG&E is continuously
21 improving its risk evaluations to consider not just the current state of risk in the system, but also
22 the projected long-term risk since the threats affecting these vintage materials are time-dependent
23 (e.g., corrosion) and the associated risk can escalate at different rates (e.g., corrosion vs. material

²⁵ The probability of failure is expressed as the probability of a leak per year, which is derived from a model that uses data including, but not limited to, asset attributes and historical leaks. The consequence of failure is expressed as the expected frequency of serious incident given a leak, which is derived from statistical modeling of the probability of a hazardous leak and resulting life-safety consequences. Internal and external data considered in the consequence model includes, but is not limited to, historical leak data, internal asset data, location, and PHMSA gas distribution incident data.

²⁶ PHMSA, *Pipeline Risk Modeling Overview of Methods and Tools for Improved Implementation*, February 1, 2020, available at: <https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2020-03/Pipeline-Risk-Modeling-Technical-Information-Document-02-01-2020-Final.pdf>.

1 degradation rates). For example, if risk projections were to indicate that a high mileage of
2 vintage plastic pipe would exceed the risk threshold in a future year, SDG&E may increase the
3 replacement rate of vintage plastic pipe to effectively target segments for replacement before the
4 risk threshold is exceeded. However, SDG&E also considers it prudent to first address the
5 segments with the current highest risk (i.e., those exceeding SDG&E’s safety threshold) which is
6 driving the current replacement strategy of the VIPP.

7 TURN’s proposed disallowance of the VIPP should be dismissed because it eliminates a
8 necessary safety-driven integrity management activity and the recommended moderate increase
9 to BSRP would not adequately address those segments that exceed the SDG&E established risk
10 thresholds. SDG&E’s proposal of VIPP and BSRP levels of activity is based on those pipe
11 segments that exceed the established safety risk threshold, as well as the need to address the
12 projected long-term risk of aging assets.

13 2. CCUE

14 CCUE disagrees with SDG&E’s forecast for VIPP pipeline miles to replace and states
15 that, “CUE's proposal to replace 56 miles per year of Aldyl-A mains and services instead of
16 SDG&E's proposed 30 miles is an increase of 26 miles per year above SDG&E's proposal.”²⁷
17 However, CCUE is mistaken in claiming SDG&E proposed 30 miles of replacement; SDG&E’s
18 proposed annual replacement of Aldyl-A installed prior to 1986 is 60 miles in 2024.²⁸

19 In addition, CCUE incorrectly determined that “...the percentage of pre-1986 miles of
20 Aldyl-A replaced to VIPP replacements ran about 49 percent.”²⁹ CCUE compared the reported
21 system miles of Aldyl-A distribution main installed prior to 1986 between years 2019-2022 then
22 compared the result with the miles reported for the VIPP. The comparison is not an accurate
23 reflection of Aldyl-A replacement percentages because system miles reflect the amount of
24 distribution mains while the VIPP reports replacements of both mains and services.

25 SDG&E is proposing to replace 60 miles of mains and services in 2024 and as discussed
26 in our direct testimony, “risk targets will be reassessed as advancements in VIPP risk analytics

²⁷ Ex. CUE (Robert Earle) at 30.

²⁸ Ex. SDG&E-09-R (Amy Kitson and Travis Sera) at AK-TS-29.

²⁹ Ex. CUE (Robert Earle) at 29.

1 are used to update and drive risk informed decisions.”³⁰ Based on the current DREAMS risk
2 results, SDG&E recommends the Commission find the forecasted 60 miles of VIPP replacement
3 in 2024 reasonable.

4 **C. FIMP**

5 **1. TURN**

6 TURN disagrees with SDG&E’s proposal for the FIMP and recommends the
7 disallowance of all of SDG&E’s forecasts for the FIMP, including capital expenditures. This is
8 discussed in detail in Section III.A.3 of this testimony.

9 **D. GSEP**

10 Parties did not take issue with SDG&E’s capital forecasts for the GSEP. SDG&E
11 recommends the Commission find SDG&E’s GSEP forecast reasonable and authorize the
12 GSEPBA to record authorized and actual revenue requirement.

13 **E. EDF Testimony**

14 EDF did not directly recommend reductions to SDG&E’s Gas Integrity Management
15 Programs forecasts, but instead raised general concerns about the “huge amount” of capital
16 requested³¹ and recommended the Commission reject the company’s overall request and set an
17 alternative, lower-level revenue requirement.³² This testimony will address EDF’s position as it
18 relates to the Gas Integrity Management Programs. EDF expresses their concern that “‘safety’
19 and ‘reliability’ capital expenditure – if based on faulty, exaggerated demand and account growth
20 assumptions – will amount to ‘*de facto*’ stealth expansion of the gas system.”³³ This statement
21 purports that SDG&E’s integrity management programs might be driven, in part, by assumptions
22 of account growth, which is baseless and undermines the objective of integrity management.
23 SDG&E’s integrity programs are driven by infrastructure risks as mandated by regulations and
24 informed by industry best practices. As stated in ASME B31.8S – Managing System Integrity of
25 Gas Pipelines, “Managing the integrity of a gas pipeline system is the primary goal of every
26 pipeline system operator. Operators want to continue providing safe and reliable delivery of

³⁰ Ex. SDG&E-09-R (Amy Kitson and Travis Sera) at AK-TS-29.

³¹ Ex. EDF-01 (Colvin, McCann, and Seong) at 48.

³² *Id.* at 45.

³³ *Id.* at 48.

1 natural gas to their customers without adverse effects on employees, the public, customers, or the
2 environment. Incident-free operation has been and continues to be the gas pipeline industry’s
3 goal.”³⁴

4 Additionally, EDF makes the unsubstantiated claims that ratepayers “now have access to
5 a range of non-pipeline alternatives that will address safety and reliability concerns without
6 having to rely on the gas system” and that “these options are in many cases more cost-
7 effective...[and] are readily available.”³⁵ Without a more detailed overview of these non-
8 pipeline alternatives and how they will address safety and reliability concerns or how their cost-
9 effectiveness was evaluated against the gas system’s cost-effectiveness, SDG&E cannot cogently
10 address this assertion or evaluate whether these claims have merit. However, EDF’s concern
11 overlooks the complexities of SDG&E’s pipeline system and its service territory as well as the
12 importance of maintaining a safe and reliable system, which is further discussed in the Policy
13 rebuttal testimony (Exhibit SDGE-201). Balancing compliance and SDG&E’s commitment to
14 safety and reliability, the Gas Integrity Management Programs activities are forecasted based on
15 the risk profile of the current infrastructure and are not intended to expand the system.
16 Furthermore, EDF’s recommendation that SDG&E be required to demonstrate need and
17 justification on a by-project basis minimizes the variability of assessment findings and resulting
18 remediation activities and ignores the time-sensitive nature and compliance-driven structure of
19 integrity management.

20 Under the TIMP, SDG&E regularly assesses its transmission pipelines with a maximum
21 reassessment cycle of seven years.³⁶ However, per 49 CFR § 192.939(a)(1), operators are
22 required to consider threats when establishing a reassessment cycle. Additionally, operators are
23 required to evaluate and remediate, as necessary, similar pipeline segments depending on the
24 types of findings during TIMP assessments.³⁷ Recommending the Commission require SDG&E
25 to demonstrate need and justification on a project-by-project basis, when new threats are
26 discovered and additional scope needs to be evaluated, is essentially recommending that SDG&E

³⁴ American Society of Mechanical Engineers, Managing System Integrity of Gas Pipelines, B31.8S.

³⁵ Ex. EDF-01 (Colvin, McCann, and Seong) at 48.

³⁶ 49 CFR § 192.939.

³⁷ 49 CFR § 192.917.

1 wait until approval has been granted before it can comply with regulations and address safety
2 concerns.

3 Adopting a project-by-project approval process would also not be prudent or cost
4 effective for the DIMP. Under the DIMP, the VIPP is a replacement plan informed by the
5 DREAMS quantitative risk assessment (QRA) model and operational considerations. The QRA
6 model prioritizes individual pipe segments based on risk analytics, such as historical
7 performance (leakage), pipe attributes, construction practices, and relative location to populated
8 areas. The net effect of these combined factors is expected to change over time, which in turn
9 will change the prioritization of pipeline segments to be replaced. Considering the span of the
10 GRC period, the development and subsequent use of a static replacement project list that spans
11 this timeframe would result in the use of outdated risk results. This would be contrary to the
12 DIMP requirement of continuous improvement through evaluating performance and
13 effectiveness.³⁸

14 The initiation of projects for the replacement of pipelines under the VIPP involves the
15 evaluation of characteristics of pipeline location, such as the area/neighborhood, the governing
16 municipality, the pipe alignment, and proximity of targeted pipeline segments to one another.
17 The pipelines targeted by the VIPP are typically located in densely populated areas and diligence
18 is necessary when planning in these locations. The evaluations are crucial to the development of
19 scopes to support successful replacement projects and are not insignificant. In general, for every
20 one mile of VIPP pipeline to be replaced, two projects are created to support the replacement.
21 For example, the 60 miles of VIPP replacements forecasted for 2024 would require the creation
22 of over 100 projects ahead of filing the GRC application and this would not even include PTY
23 projects that would need to be executed during the GRC cycle. Since project durations may span
24 over two years depending on the requirements of the area (e.g., permitting, moratorium,
25 environmental mitigation), project-by-project approvals would also require that the Commission
26 review and provide approvals or disapprovals of projects in a timely manner for SDG&E to
27 successfully execute them within the GRC cycle.

28 Furthermore, the costs for pipeline replacement fluctuate significantly between projects
29 due to the unique characteristics of each scope. This variation may be attributed to the

³⁸ 49 CFR § 192.1007.

1 characteristics of the pipeline location and the specific construction-related requirements of the
2 governing municipality. The level of targeted replacement mileage and its distribution across the
3 service territory allows SDG&E to develop a budgetary estimate that incorporates such cost
4 variation. The combined uncertainty of both project approval and additional/unforeseen changes
5 requested by the Commission could negatively affect overall project spend and the accuracy of
6 cost projections, essentially impacting the cost effectiveness of SDG&E's safety and reliability
7 activities and increasing the burden on ratepayers.

8 SDG&E considers delivering safe and reliable service at reasonable rates to be of
9 paramount importance and recommends the Commission consider a balanced approach when
10 evaluating the Gas Integrity Management Programs.

11

12 **V. CONCLUSION**

13 The activities and projects described herein and in our direct testimony and workpapers
14 are necessary for SDG&E to achieve its goal of providing safe and reliable service at reasonable
15 rates. SDG&E remains committed to mitigating risks associated with safety, infrastructure
16 integrity, and system reliability, and as described in this rebuttal testimony, the proposals of the
17 parties are either based on inaccurate assumptions, misunderstandings of SDG&E's proposals, or
18 a lack of appreciation for the vital nature of integrity management. Additionally, parties'
19 recommendations for reductions and disallowance of activities and balancing accounts generally
20 demonstrate a failure to consider the challenges that SDG&E faces while managing safety,
21 reliability, and compliance activities; these challenges include continuously changing asset
22 conditions (e.g., age, environment) and evolving regulatory requirements and industry best
23 practices.

- 24 • TIMP
 - 25 ○ No parties disputed the TY 2024 TIMP O&M forecast.
 - 26 ○ No parties disputed the TIMP capital forecasts.
- 27 • DIMP
 - 28 ○ TURN recommended the disallowance of O&M and capital for the
 - 29 DIMP VIPP. This is based on an incomplete and imbalanced analysis of
 - 30 SoCalGas's distribution pipeline system that excludes all factors other
 - 31 than leak rates and is inadvisable in managing pipelines safely.

- 1 • FIMP
- 2 ○ TURN recommended the disallowance of O&M and capital for the
- 3 FIMP. As discussed at length in Section III.A.3. of this testimony, the
- 4 FIMP is necessary because the proposed safety-driven activities cannot be
- 5 included in existing integrity management programs and a centralized and
- 6 integrated approach would improve the safety of SDG&E’s infrastructure.
- 7 • GSEP
- 8 ○ No parties disputed the TY 2024 GSEP O&M forecast.
- 9 ○ No parties disputed the GSEP capital forecasts.
- 10 SDG&E recommends the Commission find SDG&E’s O&M and capital forecasts
- 11 reasonable and authorize the continuation of the TIMPBA and DIMPBA, as well as the creation
- 12 of the FIMPBA and GSEPBA.
- 13 This concludes our prepared rebuttal testimony.

1 **VI. WITNESS QUALIFICATIONS**

2 **AVIDEH RAZAVI**

3 My name is Avidesh Razavi. I assumed sponsorship of this area from Amy Kitson. I am
4 employed by SoCalGas as the Director of Asset Risk and Strategy Management for SoCalGas
5 and SDG&E. My business address is 555 West Fifth Street, Los Angeles, CA 90013-1011.

6 I joined SoCalGas in 2012 as an Engineer in Pipeline Integrity. Since that time, I have
7 held numerous technical and management positions with increasing levels of responsibility in
8 Storage Technical Services, Underground Storage Operations, and Integrity Management and
9 Strategic Planning. I have been in the position of Director of Asset Risk and Strategy
10 Management since 2023. In this position, my responsibilities include overseeing the Storage
11 Integrity Management Program, Facilities Integrity Management Program, Regulatory and
12 Financial Controls, and Risk Strategy for the Gas Integrity Management Programs.

13 Prior to joining SoCalGas, I worked at the Inland Empire Utilities Agencies and
14 Schlumberger. I graduated from California Polytechnic State University of Pomona in 2011 with
15 a Bachelor of Science Degree in Chemical Engineering.

16 I have not previously testified in a formal proceeding before the Commission.

APPENDIX A
GLOSSARY OF TERMS

ACRONYM	DEFINITION
A	Application
API	American Petroleum Institute
AMPP	Association for Materials Protection and Performance
ASME	American Society of Mechanical Engineers
BSRP	Bare Steel Replacement Program
CA	Contact Administrator
CCUE	Coalition of California Utility Employees
CFR	Code of Federal Regulations
Commission	California Public Utilities Commission
CPUC	California Public Utilities Commission
DIMP	Distribution Integrity Management Program
DIMPBA	Distribution Integrity Management Program Balancing Account
DREAMS	Distribution Risk Evaluation and Monitoring System
ECDA	External Corrosion Direct Assessments
EDF	Environmental Defense Fund
EMAT	Electro Magnetic Acoustic Transducer
FIMP	Facilities Integrity Management Program
FIMPBA	Facilities Integrity Management Program Balancing Account
FTE	Full Time Equivalent
GIS	Geographic Information System
GRC	General Rate Case
GSEP	Gas Safety Enhancement Program
GSEPBA	Gas Safety Enhancement Program Balancing Account
ILI	Inline Inspection
NACE	National Association of Corrosion Engineers
NDE	Non-Destructive Examinations
NFPA	National Fire Protection Association
NGV	Natural Gas Vehicle
O&M	Operating & Maintenance
PHMSA	Pipeline and Hazardous Materials Safety Administration
PUC	Public Utilities Code
QRA	Quantitative Risk Assessment
SCGC	Southern California Generation Coalition
SDG&E	San Diego Gas & Electric Company
SME	Subject Matter Expert
SoCalGas	Southern California Gas Company
SPD	Safety Policy Division
TIMP	Transmission Integrity Management Program
TIMPBA	Transmission Integrity Management Program Balancing Account

ACRONYM	DEFINITION
TURN	The Utility Reform Network
TY	Test Year
VIPP	Vintage Integrity Plastic Program

APPENDIX B
DATA REQUEST RESPONSES

- 1. SDG&E's supplemental response to TURN-SEU-023, Question 2**
- 2. Attachment to SDG&E's supplemental response to TURN-SEU-023, Question 2**

2. Regarding the Response to TURN DR 013-02: Please provide an excel spreadsheet that shows the number of leak repairs on plastic pipe segregated by year of pipe installation and material subtype (distinguishing between the various types of plastic in the system if possible) for each of the past ten years, separately for SDG&E and SCG.

SoCalGas Response 2:

SoCalGas objects to this request on the grounds that it is overly broad and unduly burdensome. Subject to and without waiving the foregoing objections, SoCalGas responds as follows:

For the leak repairs for the past five years (2017-2021), see separately attached “TURN-SEU-023_Q2”.

SoCalGas Supplemental Response 2:

SoCalGas/SDG&E has identified two material subtypes for plastic pipelines in its medium pressure distribution system, as described in its response to TURN-SEU-023 (see the response to Question 16 and the attachment, extracted below, to Question 2).

The attachment (TURN-SEU-023_Q2 Supplement) provides results for Aldyl-A installed prior to 1986 and has been further segregated reflecting an acknowledged update by the manufacturer of Aldyl-A, Dupont, regarding improvements made to the manufacturing processes, as identified on page 10 of the CPUC Hazardous Analysis and Mitigation Report. Plastic pipelines made based on the more modern TR418 formulation are maintained as a single grouping. Additionally, leak rates were calculated for years 2012-2019 using 2019 YE mileage with years 2020 and 2021 using the respective YE miles for each of those years. For years prior to 2019, mileage was not recorded with respect to material characteristics such as plastic manufacturer.

Company	Facility	Materials		2012	2013	2014
SoCalGas	Main	Aldyl-A Plastic Pre-1973	Mileage	404	404	404
			Leak Count	25	19	33
			Leak Rate	0.062	0.047	0.082
		Aldyl-A Plastic 1973-1985	Mileage	7,769	7,769	7,769
			Leak Count	622	773	944
			Leak Rate	0.080	0.099	0.122
		Modern Plastic 1976-2021	Mileage	16,976	16,976	16,976
			Leak Count	337	402	409
			Leak Rate	0.020	0.024	0.024
	Service	Aldyl-A Plastic Pre-1973	Mileage	464	464	464
			Leak Count	15	17	23
			Leak Rate	0.032	0.037	0.050
		Aldyl-A Plastic 1973-1985	Mileage	10,360	10,360	10,360
			Leak Count	494	601	625
			Leak Rate	0.048	0.058	0.060
Modern Plastic 1976-2021		Mileage	20,243	20,243	20,243	
		Leak Count	308	397	377	
		Leak Rate	0.015	0.020	0.019	
SDG&E	Main	Aldyl-A Plastic Pre-1973	Mileage	148	148	148
			Leak Count	8	8	6
			Leak Rate	0.054	0.054	0.041
		Aldyl-A Plastic 1973-1985	Mileage	1,397	1,397	1,397
			Leak Count	66	55	79
			Leak Rate	0.047	0.039	0.057
		Modern Plastic 1976-2021	Mileage	3,102	3,102	3,102
			Leak Count	5	8	14
			Leak Rate	0.002	0.003	0.005
	Service	Aldyl-A Plastic Pre-1973	Mileage	125	125	125
			Leak Count	2	5	6
			Leak Rate	0.016	0.040	0.048
		Aldyl-A Plastic 1973-1985	Mileage	1,185	1,185	1,185
			Leak Count	44	37	60
			Leak Rate	0.037	0.031	0.051
Modern Plastic 1976-2021	Mileage	2,995	2,995	2,995		
	Leak Count	39	20	28		
	Leak Rate	0.013	0.007	0.009		

Leak Fix Year

2015	2016	2017	2018	2019	2020	2021
404	404	404	404	404	385	362
26	27	41	47	48	40	34
0.064	0.067	0.101	0.116	0.119	0.104	0.094
7,769	7,769	7,769	7,769	7,769	7,735	7,670
766	829	961	1,236	1,372	1,516	1,276
0.099	0.107	0.124	0.159	0.177	0.196	0.166
16,976	16,976	16,976	16,976	16,976	17,252	17,673
353	412	445	416	439	390	424
0.021	0.024	0.026	0.025	0.026	0.023	0.024
464	464	464	464	464	466	482
18	16	26	24	18	21	23
0.039	0.034	0.056	0.052	0.039	0.045	0.048
10,360	10,360	10,360	10,360	10,360	10,403	10,570
483	569	549	571	607	602	470
0.047	0.055	0.053	0.055	0.059	0.058	0.044
20,243	20,243	20,243	20,243	20,223	20,708	21,431
374	384	494	443	378	336	216
0.018	0.019	0.024	0.022	0.019	0.016	0.010
148	148	148	148	148	138	114
14	16	16	16	17	10	5
0.095	0.108	0.108	0.108	0.115	0.072	0.044
1,397	1,397	1,397	1,397	1,397	1,406	1,397
86	73	81	103	103	75	88
0.062	0.052	0.058	0.074	0.074	0.053	0.063
3,102	3,102	3,102	3,102	3,102	3,121	3,168
10	14	6	7	11	11	17
0.003	0.005	0.002	0.002	0.004	0.004	0.005
125	125	125	125	125	99	84
7	7	8	4	7	3	1
0.056	0.056	0.064	0.032	0.056	0.030	0.012
1,185	1,185	1,185	1,185	1,185	1,189	1,177
61	45	55	70	64	46	34
0.051	0.038	0.046	0.059	0.054	0.039	0.029
2,995	2,995	2,995	2,995	2,995	3,040	3,092
18	14	23	30	30	21	20
0.006	0.005	0.008	0.010	0.010	0.007	0.006