Company:	San Diego Gas & Electric Company (U 902 M)
Proceeding:	2024 General Rate Case – Track 3
Application No.:	A.22-05-016
Exhibit:	SDG&E-T3-WMPMA-13

EXHIBIT OF
JENNIFER KAMINSKY
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY REGARDING
ASSET MANAGEMENT AND INSPECTIONS

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

May 2026

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I. INTRODUCTION

Q. What is the purpose of your exhibit?

A: This exhibit responds to the May 6, 2026 Email Order Requiring Additional Evidence from the Administrative Law Judges (ALJs), as modified by the subsequent May 19, 2026 email order.

Q. Are PG&E and SCE's drone and inspection comparable to SDG&E's drone programs, namely the Drone Investigation, Assessment, and Repair Program (DIAR) and the Risk Informed Drone Inspection Program (RIDI)?

A: No. Based on my review of information provided to me by Southern California Edison Company (SCE) and Pacific Gas and Electric Company (PG&E) and publicly available information, I understand that while all three utilities are implementing aerial inspection programs that include the use of drones, these programs are not comparable to SDG&E's drone program in methodology, cost, scope, or time frame.

First, while both SCE and PG&E describe "aerial inspections" as a component of their asset management strategy, the other large IOUs' programs include a mix of drone, helicopter, and fixed-wing inspections.[1] Both PG&E and SCE have significant distinctions from SDG&E's drone programs, as follows:

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[1] *See*, *e.g.*, PG&E TY 2027 General Rate Case Chapter PG&E-4 at 14-13. "Aerial Inspections use drones *and other aerial means* to inspect overhead electric distribution facilities to examine and record abnormal conditions that will adversely impact safety or reliability."

- PG&E did not have any drone-related program prior to 2022. Based on a pilot conducted in 2022 and 2023, PG&E found that aerial inspections capture a variety of asset conditions that are challenging to see from a ground vantage point, including emergency conditions. The aerial inspection plot included both helicopter and drone inspections.[2] Beginning in 2024, PG&E scaled its aerial inspections, and the program continues with inspections occurring on a three-year risk and time-based cycle.

- SCE does not have a separate drone distribution aerial inspection program; rather drone inspections are a component of SCE's "Distribution HFRA 360 Program." SCE has noted it is considering potentially expanding the number of drone inspections that it conducts each year, which "may involve an up-front investment of a larger magnitude of procurement, training, and implementation costs than in prior years."[3]

In contrast to SCE and PG&E, starting in 2019, SDG&E established a discrete drone-only inspection program, through which SDG&E performed drone inspections for the entirety of the High Fire Threat District (HFTD) and parts of the Wildland Urban Interface (WUI). This comprehensive review of assets afforded SDG&E a baseline for situational awareness and asset risk across the riskiest areas of its service territory, and identified approximately 35,500 necessary repairs. No other California utility has performed such an assessment.

Second, neither SCE nor PG&E's inspection programs include an approved WMP target specific to drone inspections. By contrast, SDG&E has approved drone inspection targets that establish a compliance obligation under Public Utilities Code Section 8386.3 and that SDG&E must satisfy. In 2023, SDG&E's approved WMP drone inspection target was 13,500 inspections.

Third, due to the fact that both SCE and PG&E's programs include a mix of aerial inspection methods, it is not possible to segregate inspection costs associated with PG&E or SCE

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2 *See* PG&E 2023 Wildfire Mitigation Plan at 1085.

3 See Attachment A.

drone inspections to determine a cost per inspection comparable to the cost per inspection presented in my Direct and Rebuttal Testimonies (see SDG&E-T3-WMPMA-06-E and SDG&E-T3-WMPMA-11).

Fourth, and perhaps most importantly, SCE and PG&E indicated repair costs specific to aerial inspection findings were not separately tracked from SCE and PG&E's general overhead distribution maintenance and repair costs. That is, SCE and PG&E do not track the repair costs that specifically result from drone inspections. Instead, they bucket as part of all electric distribution repairs by asset-type. By contrast, to facilitate transparency regarding the scope of SDG&E's DIAR and RIDI programs, SDG&E tracked the costs of infrastructure repairs arising from drone inspections separately from repairs performed through other Asset Management and Repair Programs.

Therefore, it is not possible to perform a comparison of SDG&E's repair costs resulting from drone inspections relative to PG&E and SCE because PG&E and SCE do not specifically track the repairs that result from drone inspections. The repair costs resulting from SDG&E's drone inspections account for about 70 percent of the total costs that SDG&E is requesting for this program. So even if one wanted to compare the costs of the (admittedly) distinct inspection programs, SDG&E's repair costs resulting from those inspections—and constituting most of the costs that SDG&E is seeking to recover for this program—are entirely distinct, separate, and not capable of comparison.

Q. To the extent PG&E described its aerial inspection costs as a component of its 2023 WMP, are those costs appropriate for comparison with SDG&E's drone inspection costs?

A: No. In developing PG&E's aerial inspection pilot, PG&E relied on lessons learned from SDG&E, which afforded them the avoidance of certain start up costs. Additionally, the three-

years between the commencement of SDG&E's drone program and PG&E's drone program allowed for cost savings due to, among other things, technological advances in drone technology and operations and avoidance of costs due to the COVID-19 pandemic. During this time, SDG&E realized similar cost savings associated with drone inspections. The reduction in SDG&E's cost per inspection is further addressed in my direct and rebuttal testimonies.

PG&E's WMP provides costs associated with its aerial inspection pilot in the table below. The drone + inspector methodology in the right-hand column represents the most reasonable comparison to SDG&E's inspection methods in 2021-2023, with a pilot plus inspector, but again, this fails to account for start-up costs and cost savings realized by PG&E through collaboration with SDG&E in developing the program and includes more limited photo capture requirements amongst other differences.

FIGURE PG&E-22-20-1:
RESULTS OF AERIAL PILOT PROJECT

	Drone-Only (Recommended for 2023)	Heli Only	Drone + Inspector
Photo Capture and Inspection Quality	All angles, high quality photos, very high find rates	Limited angles, missed ~20% structures, Average quality photos, medium find rates	All angles, high quality photos, high find rates, sub optimum field viewing, subject to glare
Speed	- 40 to 50 asset capture per day - 40 to 45 desktop inspections per day	- 40 to 45 desktop inspections per day	- 20 to 25 drone + field inspections per day per team - 40 to 45 desktop inspections per day
Unit Cost (pilot scale)	$186 per structure	$221 per structure	$311 per structure
Customer Impact / safety	Minimal negative customer impact	Minimal negative customer impact, some noise complaints	Minimal negative customer impact
Other			Scheduling challenges with drone pilots with ground inspectors

Q. What else should the Commission consider, if it compares SDG&E's drone inspection programs to those of other utilities.

A: When considering the costs of SDG&E's drone inspection programs and the associated repairs performed from 2019-2023, the Commission must consider the costs avoided through reduction of wildfire risk. My testimony describes the tens of thousands of wildfire risk conditions identified by drone inspections, including approximately 365 Level 1 emergency conditions that presented imminent risk of failure. Any one of those conditions could have resulted in equipment failure and ignition. An assessment of the potential consequence of those

ignitions during high-risk conditions shows that, aside from the potential for loss of lives, property, and communities, the costs of such a fire far exceed the costs associated with the drone programs (including both costs of inspection and repairs).

To provide additional illustration of a real-life assessment of potential consequences from an equipment failure resulting from a failed connector, I have also included the $16.5 billion in costs associated with the Camp Fire. SDG&E's drone inspection program was designed to identify exactly the high-risk but hard to identify conditions that resulted in that Fire.

Figure 1: Projected Wildfire Losses Versus Risk Reduction Costs (Based on Technosylva 24 Hour Consequence Modeling)

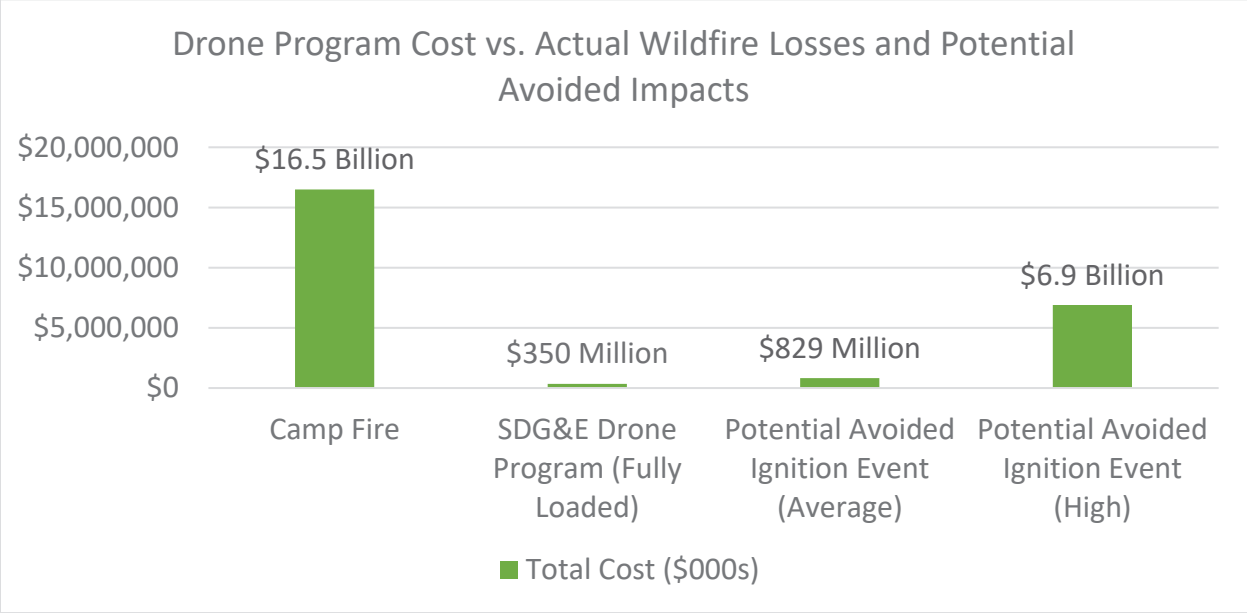


Figure 2: Camp Fire

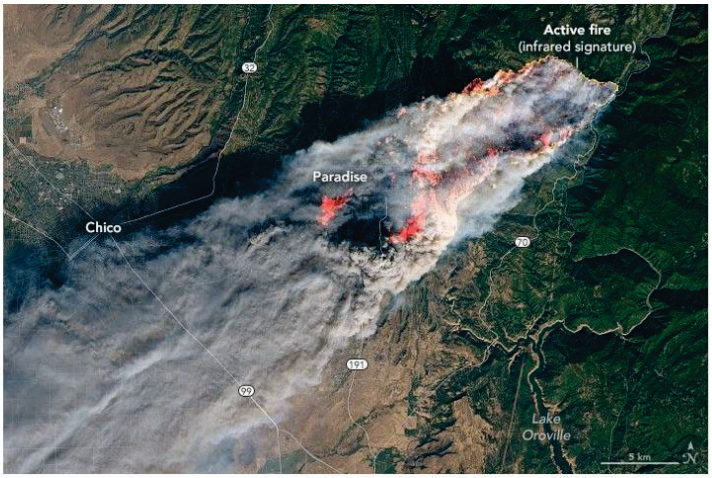
Location: PG&E Transmission tower 27/222

Date: 11/8/2018

Condition: Damaged Hardware (Failed C-Hook)

Wildfire Impact (Actual):

- ~$16.5 Billion
- 85 lives lost
- 11,000 homes destroyed
- 153,336 acres burned



Source: https://science.nasa.gov/earth/earth-observatory/camp-fire-rages-in-california-144225/

Further demonstration of avoided consequences is provided in the figures below, which represent Technosylva 24-hour consequence modeling of potential ignitions during highest-risk fire conditions, akin to those present in San Diego in January 2025 around the time of the Los Angeles Wildfires. Each of these ignition simulations is based on a condition identified through SDG&E's drone inspections and subsequently remediated through repair. The figures below represent the potential consequences of failure to identify and repair these conditions.

Figure 3: Loose Conductor (Rural Hillside Pole with Limited Ground Access, Valley Center)

Location: P813197

Date: 12/17/2019

Condition: Loose Conductor – Improper Wrap

Wildfire Impact (24hr):

- ~$6.9 Billion
- Population 32,313
- 5,740 buildings destroyed
- 39,285 acres burned

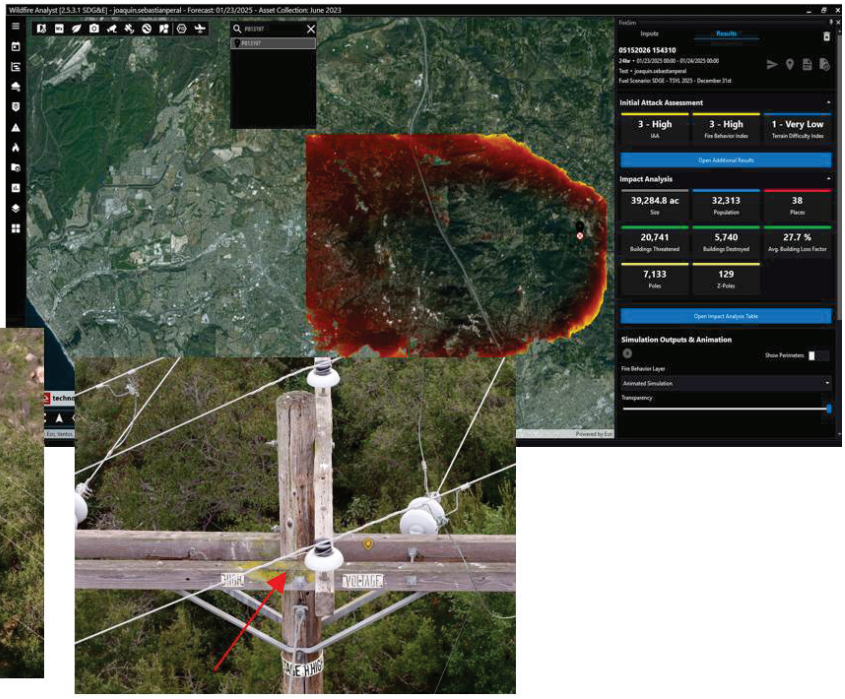
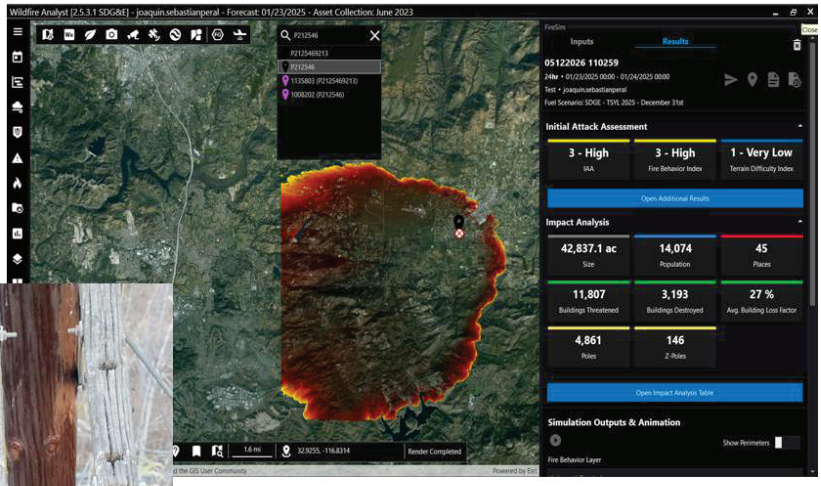


Figure 4: Cracked Crossarm on Top of Pole (Near Home in Ramona)

Location: P212546
Date: 12/13/2021
Condition: Damaged Crossarm
Wildfire Impact (24hr):

- ~$3.9 Billion
- Population 14,074
- 3,193 buildings destroyed
- 42,837 acres burned



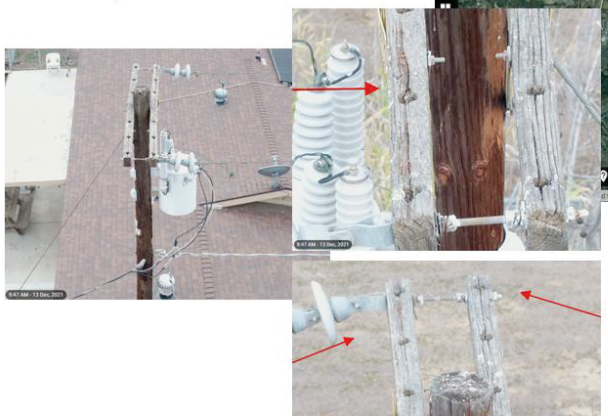


Figure 5: Loose Connector on Distribution Underbuild (South Ramona)

Location: Z104187
Date: 7/11/2023
Condition: Loose Hardware (Cotter key)
Wildfire Impact (24hr):

- ~$3.5 Billion
- Population 11,816
- 10,786 buildings destroyed
- 36,184 acres burned

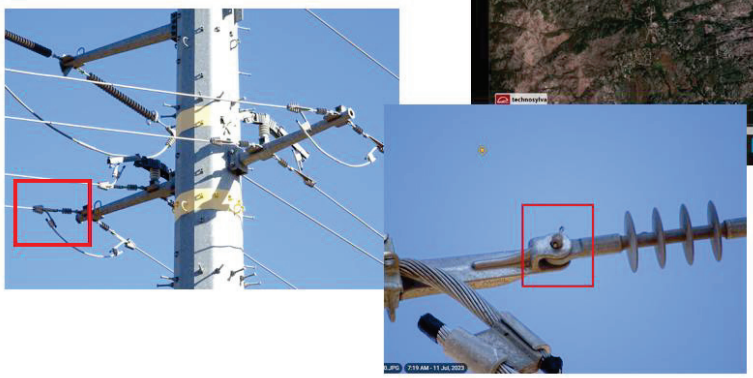
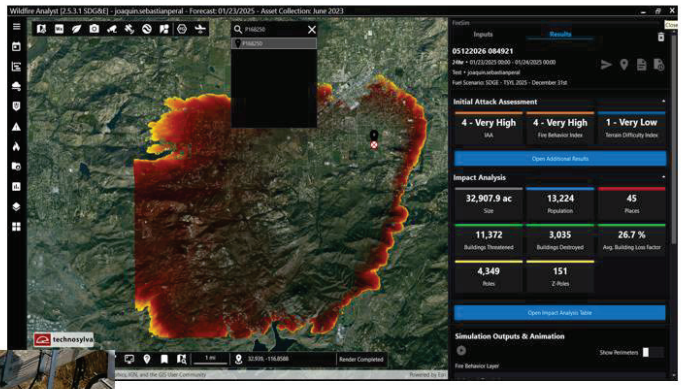


Figure 6: Cracked crossarm only visible from above (Ramona)

Location: P168250
Date: 8/23/2021
Condition: Damaged Crossarm
Wildfire Impact (24hr):

- ~$3.7 Billion
- Population 13,224
- 3,035 buildings destroyed
- 32,908 acres burned



Figures 3-6 above demonstrate that the DIAR and RIDI programs are an effective, proactive approach to mitigate equipment failure that could be catastrophic and cause a wildfire, such as the Camp Fire.

Q. Does this conclude your testimony?

A. Yes.

ATTACHMENT A

Southern California Edison
A.22-05-015 et al – SDG&E, SoCalGas 2024 GRC

DATA REQUEST SET S D G E - S C E - 0 0 1

To: SDGE
Prepared by: Kyle Ferree
Job Title: Senior Advisor
Received Date: 5/13/2026

Response Date: 5/18/2026

Question 01:
• Does SCE have a distinct distribution infrastructure drone inspection program?
• Does that program have approved WMP targets?
o Are drone inspection and repair costs separately forecasted in SCE's WMPs?
• Are SCE's costs associated with drone distribution inspections tracked separately for purposes of reporting or GRC forecasts?
o If yes, where are those costs provided? If possible, please provide a citation to testimony, workpapers, or a CPUC decision.
o If not, are SCE's costs associated with drone distribution inspections aggregated and presented with costs associated with other distribution asset inspections?
• When/if a drone inspection identifies the need for remediation/repair, are those repair costs separately tracked and reflected as part of the drone distribution inspection program?
o If yes, where are those costs reflected?
o If not, how are costs to perform distribution repairs of assets identified through drone inspections tracked, are they aggregated with other asset inspection-related repairs?

Response to Question 01:

- SCE has a Distribution HFRA 360 program which combines ground and aerial inspections into a single program. The drone (aerial) inspections are performed at the same time as the ground inspections in the majority of cases for distribution inspections.

- SCE has approved annual WMP targets for Distribution HFRI (High Fire Risk Informed) Inspections - Ground and Aerial (IN-1.1). The approved 2026 WMP target for the IN-1.1 initiative is to inspect 206,000 distribution assets via both ground and aerial inspections.

- Drone inspection and repair costs are not separately forecast. SCE's repair (remediation) costs are forecast as either capital or O&M to perform repairs based on the HFRI 360 inspections.

- SCE began performing combined aerial and ground inspections in 2023. In SCE's 2025 General Rate Case (GRC), SCE included a forecast for ground and aerial inspection costs under the D-HFRI 360 program. The costs were not separated between ground and aerial inspections because these inspections are conducted simultaneously and often by the same inspector during a single visit.

- Prior to combining ground and aerial inspections, SCE spent $44.602 million in 2021 and $29.074 million in 2022 distribution aerial inspections. These costs were incurred to conduct approximately 180,000 and 155,000 distribution aerial inspections in 2021 and 2022, respectively.
    - Other distribution asset inspection costs such as Infrared Inspections are tracked separately and not part of the ground and aerial inspections.
- Costs to perform repairs identified from drone inspections are not tracked separately; asset inspection repairs are all recorded as part of asset remediation costs and separated by HFRA and Non-HFRA, and by capital and O&M.

Please note that SCE is considering potentially expanding the number of drone inspections that it conducts each year, which may involve an up-front investment of a larger magnitude of procurement, training, and implementation costs than in prior years. If SCE pursues such an expansion, SCE will provide additional information in its future WMP and GRC filings.