Supplement to First Errata to San Diego Gas and Electric Company's 2022 Wildfire Mitigation Plan

San Diego Gas and Electric Company (SDG&E) identified 3 additional errata to the 2022 Wildfire Mitigation Plan Update (WMP Update) submitted on February 11, 2022, specifically on Table 5-2. Two other updates were found in Tables 11 and 12. The errata consist of additional information that was identified and included in response to data requests and corrections to information contained within Table 5-2, 11 and 12.

The updates to the 2022 WMP Update are described below and this document.

Table 1: Summary of Supplemental Updates to the WMP

Location	Updated Information
Table 5-2	This information was provided in response to OEIS-SDGE-
	2022-005, questions 5 and 6
Table 5-2	This information was provided in response to OEIS-SDGE-
	2022-006, question 2
Table 5-2	Corrected Table 5-2 to include LiDAR Inspections Vegetation
	Management and Air Quality Sensors, as per Table 12
Attachment B - Table 11	The number of MBL customers impacted by the Q4 2021 PSPS
	event was updated.
Attachment B - Table 12	The quantitative metric for initiative 7.3.2.2.1 for Air Quality
	Sensor installations was provided in 2022 and 2023.

Corrections to Provide Additional Information or Clarify Statements

<u>Section 7.3.5.20:</u> In response to OEIS-SDGE-22-005, SDG&E provided corrected vegetation management targets. The question and response is provided below.

OEIS Question 5:

Regarding SDG&E's 2022 pole brushing target:

In Table 5-2 (p. 156), SDG&E's "perform pole brushing" target for 2022 is 35,000 poles. In Section 7.3.5.20 "Vegetation management to achieve clearances around electric lines and equipment" (p. 302) and in Attachment B, Table 12, cell AU91, SDG&E's pole brushing target is 34,000.

a. Which pole brushing target for 2022 is correct?

SDG&E Response:

The correct target for pole brushing for 2022 is 34,000.

OEIS Question 6:

Regarding the number 12,500 in Attachment B, Table 12, cell AU80: In Attachment B, Table 12, cell AU80 (Section 7.3.5.9 "Other discretionary inspections of vegetation around distribution electric lines and equipment") the number "12,500" appears. SDG&E did not indicate the unit.

- a. Is cell AU80 supposed to match the target in Table 5-2 "Perform enhanced inspections, patrols and trimming" of 12,824 trees (p. 156)?
 - i. If so, which number is correct?
 - ii. If not, to what does 12,500 refer?

SDG&E Response:

- a. Yes, cell AU80 is supposed to match the target in Table 5-2 and Table 5-2 is supposed to reflect 12,500 trees.
 - i. Cell AU80 is the correct target. The correct number is 12,500 and the unit is trees.

<u>Section 7.3.5.8:</u> In response to OEIS-SDGE-22-006, SDG&E provided corrected vegetation management targets. The question and response is provided below.

OEIS Question 2:

Regarding Quantified Vegetation Management Compliance Targets:

- a. Does SDG&E plan to perform LiDAR inspections on transmission lines and equipment for vegetation management in 2022 (Section 7.3.5.8 "Remote sensing inspections of vegetation around transmission electric lines and equipment," p. 292)?
 - i. If so, how many circuit miles?
- b. In SDG&E's response to SDGE-21-07 "Quantified Vegetation Management Compliance Targets," SDG&E states that Section 7.3.5.7 does not have a quantitative target: "Section 7.3.5.7 of the 2022 WMP Update VM does not currently have quantifiable goals for the use of technologies such as LiDAR" (Attachment D, p. 19). However, in Table 5-2, SDG&E has a 730-mile target for "Remote sensing inspection of vegetation around distribution lines and equipment"; this is consistent with Table 12 where SDG&E shows the same number, 730, for initiative 7.3.5.7. Is the passage quoted above from p. 19 of Attachment D supposed to read "7.3.5.8" (i.e., SDG&E has no targets for remote sensing of transmission lines and equipment)?
 - i. Please state clearly the targets set by SDG&E for 2022 for different kinds of remote sensing for (1) transmission and (2) distribution (including a target of "0" if applicable).
- c. In SDG&E's response to SDGE-21-07, SDG&E states "SDG&E will begin quantifying [initiative 7.3.5.13, "Quality assurance/quality control of vegetation management"] in the WMP 2022 Update by recording the number of assets and percentage of completed work audited" (Attachment D, p. 20). In Section 7.3.5.13 of its 2022 WMP Update (p. 293), SDG&E states that it has a "minimum random sampling of 15 percent of completed work..." and in Table 12 under 7.3.5.13, SDG&E puts "15%" for "alternative units" (Cell AU84). However, this 15% does not appear in Table 5-2 "Plan Program Targets"

(p. 150). Is this an error? Did SDG&E intend to include the 15% as a program target in Table 5-2?

SDG&E Response:

- a. SDG&E does not plan to perform LiDAR inspection on transmission lines for vegetation management in 2022. SDG&E's Transmission Engineering Department utilizes LiDAR in their design activities. Any potential vegetation conditions identified during this activity are communicated to Vegetation Management. SDG&E's Transmission Construction and Maintenance Department has used LiDAR in past transmission equipment inspection activities and communicated findings to VM.
- b. SDG&E plans to refresh LiDAR data for all HFTD distribution circuits in 2022. This activity is described in Section 7.3.4.7. As part of this data capture, SDG&E has a target of 730 distribution circuit line miles in 2022 where vegetation clearance information will be calculated and reviewed. SDG&E does not have any target to complete LiDAR inspections of transmission lines for vegetation management in 2022.
 - a. 7.3.5.7 Remote sensing inspections of vegetation around distribution electric lines and equipment (LiDAR) Target 730 miles
 - b. 7.3.5.8 Remote sensing inspections of vegetation around transmission electric lines and equipment (LiDAR) 0 (No target)
- c. Yes, the 15% should be included as a program target in Table 5-2.

Corrections to Table 5-2

Revised Table 5-2 is attached. Revisions to the original filing of the 2022 WMP Update are entered in red text and summarized in Table 1 above.

Corrections to Attachment B Table 11

SDG&E became aware of an error in the reporting of MBL customers impacted by the Q4 2021 PSPS event. The number of MBL customers impacted has been updated in Table 11 from 47 customers to 406 customers.

Corrections to Attachment B Table 12

The quantitative target for initiative 7.3.2.2.1 "Air Quality Index" was provided in Table 12 for 2022 and 2023 and represents the number of Air Quality Sensors being installed.

5.3 Plan Program Targets

Instructions: Program targets are quantifiable measurements of activity identified in WMPs and subsequent updates used to show progress towards reaching the objectives.

List and describe all program targets the electrical corporation uses to track utility WMP implementation and utility performance over the last five years. For all program targets, list the 2019 to 2021 performance, a numeric target value that is the projected target for end of year 2022 and 2023, units on the metrics reported, the assumptions that underlie the use of those metrics, update frequency, and how the performance reported could be validated by third parties outside each utility, such as analysts or academic researchers. Identified metrics must be of enough detail and scope to effectively inform the performance (i.e., reduction in ignition probability or wildfire consequence) of each targeted preventive strategy and program.

Pub. Util. Code Section 8386.3(c)(5) requires a utility to notify Energy Safety "after it completes a substantial portion of the vegetation management (VM) requirements in its wildfire mitigation plan." To ensure compliance with this statue, the utility is required to populate Table 5.3-1 with VM program targets that the utility can determine when it has completed a "substantial portion" and that Energy Safety can subsequently audit. Energy Safety has provided some required, standardized VM targets below. It is expected that the utilities provide additional VM targets beyond those required. The identification of other VM targets and units for those targets (e.g., for inspections, customer outreach, enhanced vegetation management, etc.) are at the discretion of the utility.

Additionally, in Table 5.3-1, utilities must populate the column "Target%/ Top-Risk%" for each 2022 performance target related to initiatives in the following categories: Grid design and system hardening; Asset management and inspections; and Vegetation management and inspections. This column allows utilities to identify the percentage of the target that will occur in the highest risk areas. For example, if a utility targets conducting 85% of its vegetation management program in the top 20% of its risk-areas, it should input "85/20" in this column. In the "Notes" column, utilities must provide definitions and sources for each of the "Top-Risk%" values provided. In the given example above, an acceptable response would be: "The top 20% of risk areas used for this target relate to the circuit segment risk rankings from [Utility Company's] Wildfire Risk Model outputs, as described in [hyperlink to Section XX] of the 2022 WMP Update."

Table 5-2: List and Description of Program Targets, Last 5 Years²

Program		2019	20	20	20	021		2022	Units	Audited
Target	Target	Performance	Target Perf.		Target	Perf.	Target	Target% / Top-Risk% *		3 rd Party
Install weather stations	13	13	30	30 30		46	20	N/A	Weather stations	No
Install cameras	NA	NA	4 4		17	17	8	N/A	Cameras	No
Install wireless fault indicators	500	594	500	502	500	544	500	T3: 85 17.0%/61.4% T2: 40 8.0%/36.2% Non HFTD: 375 75.0%/2.4%	Wireless fault indicators	No

¹ Energy Safety intends to define "substantial portion" in its forthcoming Compliance Guidelines. This definition may be included in the Final version of the 2022 WMP Update Guidelines

² This table is numbered 5.3-1 in the 2022 WMP Guidelines.

Program		2019	20	20	20	021		2022	Units	Audited
Target	Target	Performance	Target	Perf.	Target	Perf.	Target	Target% / Top-Risk% *		3 rd Party
Replace SCADA capacitors	NA	NA	30	30	35	32	36	T3: 2 5.6%/61.4% T2:22 61.1%/36.2% Non HFTD: 12 33.3%/2.4%	SCADA capacitors	No
Covered Conductor Installation	0	0	1	1.9	20	20.6	60	77.3%/71.9%	Miles	No
Expulsion fuse replacement	2,250	2,490	3,000 3,179 3,970		3,976	277	T3: 50 18.1%/61.4% T2:227 81.9%/36.2%	Expulsion Fuses	No	
Install sectionalizin g devices	7	7	7 23		10	13	10	T3: 10 100.0%/61.4%	Sectionaliz ing devices	No
Install micro grids	0	0	4 4		0	6	4	T3: 3 75.0%/61.4% T2: 1 25.0%/36.2%	Microgrids	No
Enable circuits with Advanced Protection	NA	NA	8	6	8	4	8	T3: 8 100.0%/61.4%	Circuits	No
Replace hotline clamps	500	660	1,650	2,061	2,250	2,743	1,700	T3: 224 13.2%/61.4% T2: 1476 86.8%/36.2%	Hotline clamps	No
Provide generators to MBL and AFN customers impacted by PSPS	65	65	1,250	1,420	2,000	2,310	2,000	T3: 1000 50.0%/61.4% T2: 1000 50.0%/36.2%	Generators	No
Provide whole facility generators to customers impacted by PSPS	NA	NA	300	75	413	355	415	T3: 207 49.9%/61.4% T2: 208 50.1%/36.2%	Generators	No
Provide generator rebates to customers impacted by	NA	NA	130	1,274	1,250	735	1,250	T3: 625 50.0%/61.4% T2: 625 50.0%/36.2%	Generators	No

Program		2019	20	20	20	021		2022	Units	Audited
Target	Target	Performance	Target	Perf.	Target	Perf.	Target	Target% / Top-Risk% *		3 rd Party
PSPS within HFTD										
Underground electric lines/equipm ent	1.6	2.6	11	15.5	25	25.92	65	70%/91.5%	Miles	No
Harden the overhead distribution system - traditional	129.75	122.9	102 99.5		100	100 100.4		T3: 2.9mi 58.0%/61.4% T2: 2.1mi 42.0%/36.2%	Miles	No
Harden transmission system - overhead	7	7	25 21.6		6.7	6.7	23.83	T2: 23.83mi 100.0%/36.2%	Miles	No
Harden transmission system - underground	3	3	0	0	0	0	5.5	T2: 5.5 100.0%/36.2%	Miles	No
Harden transmission system - distribution underbuilt	10	10	9.4	9.4	2.7	3.4	2.7	T2: 2.7 100.0%/36.2%	Miles	No
Fire harden CNF - transmission overhead	28	25	26	29.1	0	0	0	0	Miles	No
Fire harden CNF - distribution overhead	22	26.4	28	21.8	6.86	6.86	0	0	Miles	No
Fire harden CNF - distribution underground	17	8.7	14	14.4	0	0	0	0	Miles	No
Replace lightning arrestors	NA	NA	0	0	924	1,789	1,848	T3: 1848 100.0% /61.4%	Lightning arrestors	No
Install LTE communicati on network stations	NA	NA	25	15	10	10	25	T3 48.0%/61.4% T2 52.0%/36.2%	Base stations	No
Perform compliance maintenance program	16,500	16,329	17,500	17,977	22,26 9	22,354	18,000	T3:6530 16.1%/61.4% T2:11647	Inspection s	No

Program		2019	20	20	20	021		2022	Units	Audited
Target	Target	Performance	Target	Perf.	Target	Perf.	Target	Target% / Top-Risk% *		3 rd Party
HFTD - 5- year detailed								28.8%/36.2% Non HFTD:22292 55.1%/2.4%		
Perform transmission system inspections - detailed	37	37	41	41	1,680	1,957	2,087	T3: 644 29.5%/61.4% T2: 1443 66.0%/36.2% Non HFTD: 98 4.5%/2.4%	Inspection s	No
Perform distribution infrared inspections	NA	NA	8,500	0 13,077 18,00 17,0		17,068	12,000	T2: 12000 100.0%/36.2%	Inspection s	No
Perform transmission infrared inspections	113	112	113	110	6,565	6,239	6,154	T3: 1993 32.4%/61.4% T2: 4161 67.6%/36.2%	Inspection s	No
Perform compliance maintenance program HFTD - wood pole intrusive	19,000	19,729	18,000 14,450		9,796	8,721	350	T2: 350 100.0%/36.2%	Inspection s	No
Perform HFTD Tier 3 inspections	11,500	15,176	11,500	11,864	10,81	11,535	12,286	T3:12268 99.9%/61.4% T2:18 0.1%/36.2%	Inspection s	No
Perform drone assessments of distribution infrastructur e	10,000	10,400	33,000	37,310	22,00	21,420	22,000	T2: 22000 100.0%/36.2%	Inspection s	No
Perform drone assessments of transmission infrastructur e	NA	NA	1,681	2679	2,715	1,440	500	T3: 50 10.0%/61.4% T2: 450 90.0%/36.2%	Inspection s	No
Perform transmission system inspections -	27	27	21	21	1,654	1,652	1,654	T3: 1654 100.0% /61.4%	Inspection s	No

Program		2019	20	20	20	021		2022	Units	Audited
Target	Target	Performance	Target	Perf.	Target	Perf.	Target	Target% / Top-Risk% *		3 rd Party
aerial 69kV Tier 3 visual										
Perform compliance maintenance program HFTD - annual patrols	86,000	86,401	86,000	86,075	86,00	86,490	86,490	T3: 39550 45.7%/61.4% T2: 46940 54.3%/36.2%	Inspection s	No
Perform transmission system inspections - visual	117	116	117 114 7,024		6,423	6,312	T3: 1993 31.6%/61.4% T2: 4319 68.4%/36.2%	Inspection s	No	
Perform substation system inspections	330	301	330 405		330	405	330	T3: 215 65.2%/61.4% T2: 115 34.8%/36.2%	Inspection s	No
Perform detailed inspections (tree trimming)	455,00 0	453,330	455,00 451,20 0 7		455,0 00	502,13 2	491,82	T3:115,038 23.4%/61.4% T2: 142,139 28.9%/36.2% Non HFTD: 234,645 47.7%/2.4%	Trees inspected	Yes
Perform fuels management	550	511	300	324	500	463	500	T3: 400 80.0%/61.4% T2: 100 20.0%/36.2%	Poles cleared	No
Remote sensing inspections of vegetation around distribution lines and equipment (LiDAR)	NA	NA	NA	NA	NA	NA	730	T3: 309 42%/61.4% T2: 396 54%/36.2% Non HFTD: 33 4%/2.4%	Miles	No
Perform enhanced inspections, patrols and trimming	7,500	8,310	17,000	17,075	17,00 0	12,578	12,500	T3: 5,386 43.1%/61.4% T2:7,114 56.9%/36.2%	Trees trimmed/ removed	No
Perform pole brushing	35,500	34,000	35,500	36,563	35,50 0	35,102	34,000	T3: 14756 43.4%/61.4% T2: 15776 46.4%/36.2%	Poles brushed	No

Program		2019	20	20	20	021		2022	Units	Audited
Target	Target	Performance	Target	Perf.	Target	Perf.	Target	Target% / Top-Risk% *		3 rd Party
								Non HFTD: 3468 10.2%/2.4%		
Remove trees with strike potential	NA	NA	NA	NA	NA	NA	106	T3: 40 37.7%/61.4% T2: 46 43.4%/36.2% Non HFTD: 20 18.9%/2.4%	VMAs inspected	No
Install Avian Protection	NA	NA	NA	NA	NA	NA	847	T3: 91 10.7%/61.4% T2: 711 83.9%/36.2% Non HFTD: 45 5.3%/2.4%Yes	Poles	No
Quality assurance / quality control of vegetation management	NA	NA	NA	NA	NA	NA NA 15		NA	Inspection Audits	
Install Air Quality Sensors	NA	NA	NA	NA	NA	NA	6	T3: 6 100%/61.4%	Sensors	

^{*} The Top-Risk% values are as follows:

- For covered conductor and undergrounding the Top Risk % was calculated using the wildfire risk scores of each distribution circuit from SDG&E's WiNGS-Planning tool which is described in Section 4.5.1.7. Please note that work is currently being scoped using the WiNGS-Planning tool, but the work planned for 2022 was scoped prior to the development of WiNGS-Planning.
- For all other programs, which are not prioritized using WiNGS-Planning, the Top Risk % was calculated using the Pre-Mitigation Wildfire Risk Score for Tier 3, Tier 2 and Non-HFTD (See Table 4-3) divided by the Total Pre-Mitigated Wildfire Risk Score (See Table 4-2). The Top Risk % is in Tier 3, followed by Tier 2 and Non-HFTD. For each target, SDG&E provides the percentage of planned work in each Tier, and the accompanying percentage of overall wildfire risk.
 - o Top Risk % are:

Wildfire Risk – Tier 3
 Wildfire Risk – Tier 2
 Wildfire Risk – Non-HFTD
 2.4%

Utility	SDG&E	
Table No.	11	"PSPS" = Public Safety Power Shutoff In tuture submissions update planned upgrade
		in tuture submissions update planned upgrade
Date Modified	2022 03 31	numbers with actuals

Date Modified	2022 03 31	numbers with actuals	Actual																							
Table 11: Recent use of PSPS and other	nene		Actual						1 0	12 (21 (22	03	04	Projected Q1	02	03	04	04 0	2 03		Q4		
										-				-						Q4	ųı ų.	-				
Metric type		Outcome metric name	2015	2016	2017	2018	201	19 2	020 2	020 2	020 2	020	2021 2	021	2021	2021	2022	2022	2022		2023 20	23 20	23	2023	Unit(s)	Comments
1. Recent use of PSPS	1.a.	Frequency of PSPS events (total)	0)	0	5	4	4	0	0	1	4	0	0	0	1	0	0	0	3.2	0	0	0		2 Number of instances where utility operating protocol requires de-	
	1.b.	Scope of PSPS events (total)	0)	0	200	265	324	0	0	2	512	0	0	0	13	0	0	0	116.5	0	0	0		5 Circuit-events, measured in number of events multiplied by number of	
	1.c.	Duration of PSPS events (total)	0)	0 65	58,397 1,04	14,423 1	1,304,723	0	0	358	2,631,426	0	0	0	147,767	0	0	0	617,794	0	0	0	617,79	Customer hours per year	Metric definition 1.c. was updated based on the correction
Customer hours of PSPS and other outages	2.a.	Customer hours of planned outages including PSPS (total)	1,010,005	859,29	90 1,77	71,855 2,06	52,326	2,333,445	246,957	98,578	428,184	2,805,055	384,390	445,526	549,162	493,707	256,240	289,673	328,685	867,872	256,240	289,673	328,685	997,29	Total customer hours of planned outages per year	In 2021 QDR-Q4 filing, data point for 2015 is updated using archieved data file. The reporting system of record stores d
June 2	2.b.	Customer hours of unplanned outages, not including PSPS (total)	1,504,042	2,058,23	37 2,09	90,995 1,88	37,418 1	1,705,636	346,753	385,697	1,113,938	470,886	407,865	388,531	391,676	515,343	484,040	322,394	573,414	515,440	484,040	322,394	573,414			DESIREMENT OF THE PROPERTY OF THE STATE OF T
	2.c.	System Average Interruption Duration Index (SAIDI) (including PSPS)	63.26	86.0	01 1	117.49 1	121.02	122.96	13.95	15.52	44.83	126.10	16.44	15.66	15.79	26.73	19.91	13.22	23.51	46.03	19.91	13.22	23.51		SAIDI index value = sum of all interruptions in time period where each interruption is defined as sum(duration of interruption * # of customer	
	2.d.	System Average Interruption Duration Index (SAIDI) (excluding PSPS)	63.26	86.0	01	86.64	77.45	69.21	13.95	15.52	44.81	18.94	16.44	15.66	15.79	20.77	19.91	13.22	23.51	21.13	19.91	13.22	23.51		3 SAIDI index value = sum of all interruptions in time period where each interruption is defined as sum(duration of interruption * # of customer	
	2.e.	System Average Interruption Frequency Index (SAIEI) (including PSPS)	0.62	0.6	58	0.58	0.66	0.64	0.13	0.17	0.27	0.22	0.16	0.14	0.15	0.18	0.16	0.13	0.19	0.17	0.16	0.13	0.19	0.17	7 SAIFI index value = sum of all interruptions in time period where each interruption is defined as /total # of customer interruptions) / /total # o	
	2.f.	System Average Interruption Frequency Index (SAIEI) (excluding PSPS)	0.62	0.6	58	0.57	0.64	0.61	0.13	0.17	0.27	0.16	0.16	0.14	0.15	0.18	0.16	0.13	0.19	0.16	0.16	0.13	0.19	0.10	6 SAIFI index value = sum of all interruptions in time period where each interruption is defined as /total #.of.customer interruptions) / /total #.o	
3. Critical infrastructure impacted by PS		Critical infrastructure impacted by PSPS	0)	0	633	832	968	0	0	0	2359	0	0	0	241	0	0	0	1007	0	0	0	1007	7 Number of critical infrastructure (in accordance with D.19-05-042)	
4. Community outreach of PSPS metrics	4.a.	# of customers impacted by PSPS	0)	0 1	17,619 3	30,069	49,880	0	0	49	100,488	0	0	0	5,858	0	0	0	14,858	0	0	0	14,858	same customer, count each event as a separate customer)	During PSPS events in 2020 December, customers who wer
	4.b.	# of medical baseline customers impacted by PSPS	0)	0	937	1,812	2,853	0	0	6	6,427	0	0	0	406	0	0	0	1,499	0	0	0	1,499	of customers impacted by PSPS (if multiple PSPS events impact the same customer, count each event as a separate customer)	
	4.c.	# of customers notified prior to initiation of PSPS event	0)	0 1	17,619 3	30,069	47,969	0	0	49	91,760	0	0	0	5,811	0	0	0	12,438	0	0	0	12438	# of customers notified of PSPS event prior to initiation (if multiple PSP events impact the same customer, count each event in which customer	
	4.d.	# of medical baseline customers notified prior to initiation of PSPS event	0)	0	937	1,812	2,756	0	0	6	6,262	0	0	0	406	0	0	0	1,272	0	0	0	1,272	# of customers notified of PSPS event prior to initiation (if multiple PSP events impact the same customer, count each event in which customer	
	4.e.	% of customers notified prior to a PSPS event impacting them	0)	0	100%	100%	96%	0	0	100%	91%	0	0	0	99%	0	0	0	97.8%	0	0	0	97.8%	_≪ =4.a. / 4.c.	
	4.f.	% of medical baseline customers notified prior to a PSPS event impacting them	0)	0	100%	100%	97%	0	0	100%	97%	0	0	0	100%	0	0	0	99.0%	0	0	0	99.0%	_% =4.a. / 4.c.	
5. Other PSPS metrics	5.a.	Number of PSPS de-energizations	0)	0	0	0	1	0	0	1	1	1	0	0	0	0.5	0.0	0.5	0.5	0.5	0	0.5	0.5	Number of de-energizations	Number of instances where utility notified the public of a potential PSPS event but no de-energization followed
	5.b.	Number of customers located on de-energized circuit	0)	0 6	67,266 7	79,587	112,582	0	0	4,214	154,413	0	0	0	14,832	0	0	0	81,153	0	0	0	81,153	Number of customers	potential i 3 3 event but no de energiation fonowed
	5.c.	Customer hours of PSPS per RFW OH circuit mile day	0)	0	3.46	8.31	24.40	0.00	0.00	0.01	42.40	0	0	0	7.48	0	0	0	6.3	0	0	0	6.3	3 =1.c. / RFW OH circuit mile days in time period	=1.c./table 6 1.a.
	5.d.	Frequency of PSPS events (total) - High Wind Warning wind conditions	0)	0	1	3	2	0	0	0	3	0	0	0	1	0	0	0	1.6	0	0	0	1.6	6 Events over time period that overlapped with a High Wind Warning as defined by the National Weather Service	
	5.e.	Scope of PSPS events (total) - High Wind Warning wind conditions	0)	0 1	16,848 3	30,048	49,462	0	0	0	90,748	0	0	0	5,858	0	0	0	13,868	0	0	0	13,868	Father and a state of the state	
	5.f.	Duration of PSPS events (total) - High Wind Warning wind conditions	0)	0 70	03,117 1,03	37,164	1,226,192	0	0	0	2,341,161	0	0	0	147,767	0	0	0	597,055	0	0	0	597,05	Curtamor hours over time period that averlanged with a High Wind	In 2021 WMP update, 5.f. was based on the definition- "o duration". To align with 1.c. definition correction requests

Utility SDG&E Notes:

Utility SDG&E Table No.	Notes: 12 Risk-Spend-Efficiency (RSE) is defined as "An estimate of the cost-effectiveness of initiative, calculated by dividing the mitigation risk reduction benefit by the mitigation cost estimate based on the full set of risk red	risk reduction	n benefits estimated from t	the incurred costs	·-															
Date Modified 2022 02 14	CAPEX = Capital expenditure; OPEX = Operating expenditure.																			
MOUNES 2022 02 14	experience unit.							Actual									Projected			
			PEX IS thousands) OPEX IS	(S thousands)						CAPEXIS the		Sthousands) Line n				. Line miles	to be	EX (S thousands) OR		Line miles to be
Table 12: Mitigation initia	tiative financials	CAP	EX (5 thousands) OPEX (5	(S thousands)	Line miles treated	CAPEX (S thousands) UP	EX (\$ thousands)	Line miles treated	CAPEX (\$ the	lousands) OPEX (5	thousands) Line n	iles treated	CAPEX (\$ tho	isands) OPEX (5 tho	ousands) treati	od CAI	EX (\$ thousands) OF	EX (5 thousands)	treated
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Metric WMP Table # /	WMP Primary Secondar KSE in KS	mment																		
type Category Other Risk Assessmen	# Initative activity targeted targeted initiated wide region Zone 1 2 3 program account s colon-7 s s nent & 7.3.1.1 A summarized risk map that shows		270 270 -	2019		1 10	1 1,191	2020		- 1,446	1,446 -	2021		2 200	2022 2,200 2,354	2.254		,420 2,420	2023	
Mapping	the overall ignition probability and P.U. Code		270 270 -			- 1,19	1 1,191			- 1,440	1,440			2,200	2,200 2,334	2,354		,420 2,420	2,979 2,979	
Other Risk Assessmen	estimated wildfire consequence 2012 NA NA NA NA NA 2019 GRC NA Exceeds § 451 neet & 7.3.1.2 Climate-driven risk map and																			
Mapping	Nert & 7.3.1.2 Climate-driven rick map and A A Constitute of the various relevant Summaria: Summaria wealther scenarios 2012 NA																			
Other Risk Assessmen	nent & 7.3.1.3 Ignition probability mapping showing																			
Mapping	the probability of ignition along the summariz electric lines and equipment 2012 NA NA NA NA NA NA NA NA NA A NA NA NA N																			
Other Risk Assessmen	weet, since and equipment 2012 NA																			
Mapping	nent & 7.3.1.4 Initiative mapping and estimation of wildfing and PSF sfuk-reduction summarid impact 2012 NA																			
Other Risk Assessmen	ent & 7.3.1.5 Match drop simulations showing the A																			
Mapping	Nett & 7.3.1.5 Match drop simulations showing the potential wild the consequence of patients and the consequence of gestions that occur along the electric 2012 NA																			
Other Situational Awareness &	7.3.2.1 Advanced weather monitoring and watering and water stations 9.00 P.U. Code P.U. Code		564 564 -			13 1,08	7 1,087			30 391	391		- 46	525	525 -		- 20	383 383		
Other Situational Awareness &	7.3.2.2 Continuous monitoring sensors																			4 4
Forecasting	NA																			
Other Situational	7.2.3.2 Exalt indicatour for detection faults. BSDS for		797 797			594 83	5 835			- 1,104	1,104 -		- 544	687	687 -		- 500			
Awareness & Forecasting	on electric lines and equipment sectionaliz P.U. Code atton, etc. 2011 NA 371.78 NA 263.75 247.08 2019 GRC NA Exceeds 9.451																			
Situational Awareness & Other Forecasting	Forecast of a fire risk index, fire																			
Other Forecasting	7.3.2.4. potential index, or similar																			
			1 1																	
Awareness & Forecasting	electric lines and equipment in tailure contact elevated fire risk conditions with 2008 NA																			
Other Situational Awareness & Forecasting	7.3.2.6. Weather forecasting and estimating impacts on electric lines and		1 1																	
Forecasting	equipment 2009 NA NA NA NA NA NA NA NA																			
Other Situational Awareness & Forecasting	7.3.2.2.1 Air Quality Index																			
Forecasting Other Situational	2022 NA NA NA NA NA NA NA 7.3.2.2.2 Satelite-based remote sensing																			
Awareness &	7.5.2.2 Salente-david remote seronig																			
Forecasting Other Situational	2022 NA Trie Potential Index		3 3 1,728	28 1.728		. 34	3 343 3	3 363 3 363		- 38	38 2,81	2 2812		243	243 3,697	3.697		323 323	1.066 4.066	
Awareness & Forecasting	Potential		3 3 3,7	1,720				3,363		- 30	30 2,02.	2 2,012		243	243 3,037	3,037		313	4,000	
Other Situational	7.3.2.4.2 Santa Ana Wind Threat Index Forecast																			
Awareness &	(SAWTI) of a fire																			
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Other Situational Awareness & Forecasting	Mifrastructure P.U. Code 2012 NA NA NA NA NA NA WIMPMA Exceeds § 451																			
Grid Grid Design &	& 7.3.3.1. Capacitor maintenance and Equipmen forning replacement program (SCADA) tallure		200 200			NA 1,03	8 1,038			30 2,806	2,806 -		- 35	3,231	2,132 -		- 40	,815 1,198		
hardenin System Hardeni	foring replacement program (SCADA) t failure 2016 NA 409.37 NA 165.61 31.62 2019 GRC NA Exceeds G.O.95																			
grid Grid Design &	§ 7.3.3.2. Grout breaker maintenance and																			
hardenin System Hardeni 8	detecting a fault 1997 NA																			
Grid Grid Design & hardenin System Hardeni	& 7.3.3. Covered conductor installation Other Equipmen	1	1,463 1,463 -			- 2,59	4 2,594		- 1	- 39,389	39,389 51	9 517	20 -	124,643	124,643 594	594 -	60 - 15),872 150,872	754 754	10
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Grid Grid Design & hardenin System Hardeni	\$ 7.33.4. Covered conductor maintenance Detailed impaction intensing 1997 NA S of		* * * * * * * * * * * * * * * * * * *																	
8 8	noring inspection 1997 NA Sof																			
Grid Grid Design & hardenin System Hardeni	& 7.3.5. Crossarm maintenance, repair, and Detailed		1																	
8	fering replacement inspection 1997 NA NA NA NA NA NA NA NA NA SOT																			
Grid Grid Design & hardenin System Hardeni	& 7.3.6. Distribution pole replacement and reinforcement, including with		1																	
8	composite poles 1997 NA NA NA NA NA NA NA NA NA		3,716 3,716 -							3.179 6.489										
Grid Grid Design & hardenin System Hardeni	t failure	3	,/16 3,716 -			2,490 6,52	1 6,521			3,179 6,489	6,489		- 3,976	734	734 -		- 227			
8	2019 NA NA NA 117.44 411.11 NA WMPMA Exceeds G.O.95																			
hardenin Grid Design &	& Grid topology improvements to lening 7.3.1.8. mitigate or reduce 1954 events ### 7.3.1.0. institute of hydren anounteen ### 595- for ### 7.3.1.0. institute of hydren anounteen ### 595- for #### 7.3.1.0. institute of hydren anounteen ### 595- for #### 7.3.1.0. institute of hydren anounteen ### 595- for ####### 7.3.1.0. institute of hydren anounteen #### 595- for ####################################																			
g System Hardeni Grid Grid Design &	foring 7.3.3.8 mitigate or reduce PSPS events & 7.3.3.9 Installation of system automation PSPS - for		3,480 3,480 -			NA 9,11	7 9,117			6 10,825	10,825		4	12,938	12,938 -		- 8 1	,669 11,669		
hardenin System Hardeni	ferring equipment (advanced protection) sectionaliz P.U. Code					3,11				- 10,023										
g Grid Grid Design &	ation, etc. 2011 NA NA NA 178.31 NA WMPMA Exceeds § 451 & 7.3.3.10. Maintenance, repair, and PSPS - for		97	22 922		660	,	3,299 3,299		2,061 -	- 3,71	4 3,714	- 2,743		- 4,321	4,321	- 1,650		4,321 4,321	- 1.20
hardenin System Hardeni	\$ 7.3.3.10. Maintenance, repair, and PSHS - for registerement of connectors, including sectionals bottom clamps which content process the connectors and the connectors and the connectors and the connectors and the connectors are connected as the connector and the connectors are connected as the connection and the connection are connected as the conne																			
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8	1997 NA NA NA NA NA NA NA NA NA		192 192 -											188 845	188.845 1.049			0.038 310.038		
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Grid hardenin Grid Design &	& Updates to grid topology to minimize																			
g System Hardeni Grid Grid Decion &	& Updates to girld topology to minimize bening 7-33.17. risk of ligition in HTDs & 7-33.81 FPS Scionalizing FSHS - for		1,321 1,106 -			7 485	4 4,062			23 1,911	1.574		- 13	1,910	1.527 -		- 10	,526 1,220		
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PSPS - for sectionaliz attion, etc. 12,997 12,550 10,400 10,400 Grid Design & 7.3.3.11. Generator Grant Program in System Hardening 1 2,310 10,400 10,400 355 735 10,350 10,350 Grid Design & 7.3.3.11. Standby Power Programs in System Hardening 2 1,754 1,754 8,934 8,934 Grid Grid Design & 7.3.3.11. Generator Assistance Progra
hardenin System Hardening 3 1,828 1,828 Grid Design & 7.3.3.17. Traditional Hardening System Hardening 1 overhead system har Grid Design & 7.3.3.17. Overhead transin System Hardening 2.1 (Transmission) Grid Design & 7.3.3.17. Overhead transmission fi nin System Hardening 2.3 (Distribution Underbuilt) Grid Design & 7.3.3.17. CNF MSUP Powerline 8 inin System Hardening 3 Program (Transmission Grid Design & 7.3.3.17. CNF (Distributon Underground) nin System Hardening 3 37,982 37,982 Grid Design & 7.3.3.17. CNF(Distribution System Hardening 3 46,282 46,282 Grid Design & 7.3.3.18. Distribution Communications inin System Hardening 1 reliability improvements (LTE) 35,476 35,476 Grid Design & 7.3.3.18. Lightning Arrestors Removal & in System Hardening 2 Replacement sset Asset Management 7.3.4.2 Detailed inspections of transmission spectio & Inspections electric lines and equipment n
Asset Asset Management 7.3.4.3 Improvement of inspection inspection
inspection & Inspections Asset Asset Management 7.3.4.5 Infrared inspections of inspectio & Inspections electric lines and equip 8,721 Asset Asset Management 7.3.4.6 Intrusive pole inspections inspectio & Inspections Asset Asset Management 7.3.4.8 LIDAR inspections of transmissio inspectio & Inspections electric lines and equipment Other discretionary inspection of distribution electric lines and equipment, beyond inspections mandated by rules and regulation. Asset inspection Asset Management in & Inspections 7.3.4.10. Other discretionary inspection of in Transmission electric lines and Asset Management 7.3.4.11. Patrol inspections electric lines and equipment electric lines and equipment. Asset Asset Management 7.3.4.12. Patrol inspections of transmiss inspectio & Inspections electric lines and equipment Asset Asset Management 7.3.4.13. Pole loading assessment progr inspectio & Inspections determine safety factor Asset Asset Management 7.3.4.14. Quality assurance / quality corr inspection & Inspections inspections Asset Asset Management 7.3.4.15. Substation inspection inspectio & inspections Asset Asset Management 7.3.4.9.1 HFTD Tier 3 Distribution Pole inspection & Inspections Asset Asset Management 7.3.4.9.2 Drone assessn inspectio & Inspections infrastructure Asset Asset Management 7.3.4.10. Drone assessments of transmission Equipmen inspectio & Inspections 1 infrastructure trailure Asset Management 7.3.4.10. Additional Transmission to & Inspections 2 Tier 3 Visual Inspection

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2 Risk-Spend-Efficiency (RSE) is defined as "An estimate of th CAPEX = Capital expenditure; OPEX = Operating It by the mitigation cost estimate based on the full set of risk reduction benefits estimated from the incurred costs. | Widdle | Primary 5 | Primary Metric WMP Table # /
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7.3.5.12. The Inspection of registration

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7.3.5.12. The Inspection of registration

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with strike potential to electric lines
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7.3.5.17 Substation inspection 7.3.5.18 Substation vegetation management Vegetatio Vegetation n Management & managem Inspections 7.3.5.19 Vegetation management system 7.3.5.20 Vegetation management to achieve clearances around electric lines and equipment
7.3.5.21 Vegetation management activities post-fire Vegetatio Vegetation

n Management & managem Inspections

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Operating Protocols P.U. Code NA 1093803 2002522 2019 GRC NA Exceeds § 451 Other Grid Operations & 7.3.6.2 Protective equipment and device Operating Protocols settings 7.3.6.6. PSPS events and mitigation of PSPS Other Equipmen impacts with rations & O

Stationed and on-call ignition
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Operating Protocols Other Equipmen contact t failure with P.U. Code 2015 NA NA NA 75399.51 155234.2 2019 GRC NA Exceeds § 451 7.3.6.7.1 Aviation firefighting program 13,461 13,461 Other Grid Operations & O 7.3.7.1. Centralized repository for data P.U. Code NA 54.11 61.21 2019 GRC NA Exceeds § 451 7.3.7.2. Collaborative research on utility ignition and/or wildfire 7.3.7.3. Documentation and disclosure of wildfire-related data and algorithms 2,208 2,208 2,800 2,800

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12 Risk-Spend-Efficiency (RSE) is defined as "An estimate of the cost-effectiveness of initiative, calculated by dividing the mitigation risk reduction benefit by the mitigation cost estimate based on the full set of risk reduction benefits estimated from the incurred costs

CAPEX = Capital expenditure; OPEX = Operating

7.3.10.1. PSPS Communication Practices

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