



Risk Assessment and Mitigation Phase
(Chapter SDG&E-Risk-1-WP)
Wildfires Involving SDG&E Equipment
Workpapers

May 17, 2021

2021 RAMP
SDG&E-Risk-1-WP
Risks Recorded and Forecast Costs Incurred Allocations Workpaper
Tab: Incurred\$
(2020 Direct \$000)

				RECORDED DOLLARS										FORECAST DOLLARS													
RAMP Chapter ID	RAMP Chapter Name	Control / Mitigation ID	Control / Mitigation Name	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	O&M				Capital				Shared Allocations (Yes/No)					
														2022				2023				2024					
														\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C1	WRRM - Ops	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 325	\$ 1,385	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,693	\$ 2,070	\$ 2,117	\$ 2,587	\$ 2,646	\$ 3,234	No
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C2	Advanced Weather Station Integration	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 561	\$ 1,032	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 503	\$ 614	\$ 561	\$ 686	\$ 561	\$ 686	No	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C3-T1	Wireless Fault Indicators (HFTD Tier 3)					\$ -						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C3-T2	Wireless Fault Indicators (HFTD Tier 2)					\$ -						\$ 838	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C3-T3	Wireless Fault Indicators (Non-HFTD)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6	\$ 981	\$ 469	\$ 826	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 590	\$ 722	\$ -	\$ -	\$ -	\$ -	No	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C4	Fire Science and Climate Adaptation Department	\$ 1,400	\$ 1,747	\$ 2,627	\$ 1,809	\$ 3,363	\$ -	\$ -	\$ -	\$ 4	\$ 424	\$ 3,256	\$ 3,980	\$ 3,700	\$ 4,523	\$ 3,700	\$ 4,523	\$ 272	\$ 333	\$ -	\$ -	\$ -	\$ -	No	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C5	High Performance Computing Infrastructure	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,579	\$ 8,041	\$ -	\$ -	\$ -	\$ -	No	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C6/M1-T1	SCADA Capacitors (HFTD Tier 3)					\$ -						\$ 344	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C6/M1-T2	SCADA Capacitors (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50	\$ 290	\$ 213	\$ 195	\$ 688	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,612	\$ 1,970	\$ -	\$ -	\$ -	\$ -	No	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C7/M2-T1	Overhead Distribution Fire Hardening - Covered Conductor (HFTD Tier 3)					\$ -						\$ 1,101	\$ 1,845	\$ 2,255	\$ 2,962	\$ 3,620	\$ 2,962	\$ 3,620	\$ 70,848	\$ 86,592	\$ 113,921	\$ 139,237	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C7/M2-T2	Overhead Distribution Fire Hardening - Covered Conductor (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 593	\$ 405	\$ 495	\$ 650	\$ 795	\$ 650	\$ 795	\$ 15,552	\$ 19,008	\$ 25,007	\$ 30,564	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C8/M3-T1	Expulsion Fuse Replacement (HFTD Tier 3)					\$ -				\$ 3,558	\$ 2,081	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C8/M3-T2	Expulsion Fuse Replacement (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 156	\$ 4,210	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,771	\$ 3,387	\$ -	\$ -	\$ -	\$ -	No	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C9/M4-T1	PSPS Sectionalizing (HFTD Tier 3)					\$ -						\$ 588	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 161	\$ 196	\$ 161	\$ 197	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C9/M4-T2	PSPS Sectionalizing (HFTD Tier 2)					\$ -						\$ 3,203	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 876	\$ 1,071	\$ 876	\$ 1,071	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C9/M4-T3	PSPS Sectionalizing (Non-HFTD)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,345	\$ 1,282	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 351	\$ 428	\$ 351	\$ 429	\$ 351	\$ 429	No	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C10/M5-T1	Microgrids (HFTD Tier 3)					\$ -						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C10/M5-T2	Microgrids (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ 371	\$ -	\$ -	\$ -	\$ 207	\$ 3,608	\$ 1,284	\$ 1,570	\$ 1,284	\$ 1,570	\$ 1,284	\$ 1,570	\$ 11,621	\$ 14,204	\$ 11,340	\$ 13,860	No			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C11/M6-T1	Advanced Protection (HFTD Tier 3)					\$ -						\$ 9,164	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,858	\$ 12,049	\$ 8,853	\$ 10,820	\$ 8,853	\$ 10,820	No	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C11/M6-T2	Advanced Protection (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,917	\$ 3,974	\$ 1,198	\$ 3,608	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C12/M7-T1	Hotline Clamps (HFTD Tier 3)					\$ 956						\$ -	\$ 1,944	\$ 2,376	\$ 1,944	\$ 2,377	\$ 164	\$ 201	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C12/M7-T2	Hotline Clamps (HFTD Tier 2)	\$ 1,900	\$ 1,096	\$ 1,069	\$ 950	\$ 2,343	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,944	\$ 2,376	\$ 1,944	\$ 2,377	\$ 164	\$ 201	\$ -	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C13/M8-T1	Resiliency Grant Programs (HFTD Tier 3)					\$ 1,692						\$ -	\$ 2,370	\$ 2,895	\$ 2,370	\$ 2,895	\$ 2,370	\$ 2,897	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C13/M8-T2	Resiliency Grant Programs (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ 587	\$ 3,384	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,740	\$ 5,795	\$ 4,740	\$ 5,795	\$ 4,740	\$ 5,793	\$ -	\$ -	\$ -	\$ -	No			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C14/M9-T1	Standby Power Programs (HFTD Tier 3)					\$ 1,754						\$ -	\$ 9,315	\$ 11,385	\$ 4,163	\$ 5,088	\$ 4,163	\$ 5,088	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C14/M9-T2	Standby Power Programs (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C15/M10-T1	Resiliency Assistance Programs (HFTD Tier 3)					\$ 304						\$ -	\$ 658	\$ 804	\$ 324	\$ 396	\$ 324	\$ 396	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C15/M10-T2	Resiliency Assistance Programs (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ 456	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 987	\$ 1,206	\$ 486	\$ 594	\$ 486	\$ 594	\$ -	\$ -	\$ -	\$ -	No			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C16/M11-T1	Strategic Undergrounding (HFTD Tier 3)					\$ -						\$ 27,512	\$ 3,199	\$ 3,909	\$ 5,170	\$ 6,319	\$ 5,993	\$ 7,324	\$ 123,023	\$ 150,361	\$ 198,843	\$ 243,031	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C16/M11-T2	Strategic Undergrounding (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 200	\$ 11,384	\$ 1,919	\$ 2,346	\$ 3,102	\$ 3,791	\$ 3,596	\$ 4,395	\$ 73,814	\$ 90,217	\$ 119,306	\$ 145,818	No			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C17/M12-T1	Overhead Distribution Fire Hardening - Bare Conductor (HFTD Tier 3)					\$ 1,447						\$ 57,969	\$ 117	\$ 143	\$ -	\$ -	\$ -	\$ 4,500	\$ 5,500	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C17/M12-T2	Overhead Distribution Fire Hardening - Bare Conductor (HFTD Tier 2)					\$ 1,861						\$ 74,531	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C17/M12-T3	Overhead Distribution Fire Hardening - Bare Conductor (Non-HFTD)	\$ 955	\$ 1,162	\$ -	\$ -	\$ 138	\$ 61,690	\$ 61,133	\$ 57,331	\$ 128,219	\$ 5,521	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C18/M13-T1	Overhead Transmission Fire Hardening - Distribution Underbuilt (HFTD Tier 3)					\$ -						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,809	\$ 3,433	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C18/M13-T2	Overhead Transmission Fire Hardening - Distribution Underbuilt (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 474	\$ 1,169	\$ 1,094	\$ 3,084	\$ 5,038	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,805	\$ 22,983	\$ 10,734	\$ 13,120	No			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C19-T1	Cleveland National Forest Fire Hardening (HFTD Tier 3)					\$ -						\$ 84,044	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C19-T2	Cleveland National Forest Fire Hardening (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,423	\$ 44,361	\$ 32,438	\$ 70,019	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C20	LTE Communication Network	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 647	\$ 1,900	\$ 9,503	\$ 40,647	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 73,103	\$ 89,348	\$ 52,200	\$ 63,800	No			

RAMP Chapter ID	RAMP Chapter Name	Control / Mitigation ID	Control / Mitigation Name	RECORDED DOLLARS											FORECAST DOLLARS												Shared Allocations (Yes/No)					
				O&M					Capital						O&M				Capital													
				2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2022		2023		2024		2022		2023		2024								
														\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High							
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C21/M14-T1	Lightning Arrestor Removal/Replacement Program (HFTD Tier 3)					\$ -						\$ 20	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,350	\$ 2,873	\$ 2,350	\$ 2,873	\$ 2,350	\$ 2,873	No
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C21/M14-T2	Lightning Arrestor Removal/Replacement Program (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C22-T1	Distribution System Inspection – CMP – 5 Year Detailed Inspections (HFTD Tier 3)					\$ 90						\$ 3,866	\$ 700	\$ 855	\$ 72	\$ 88	\$ 185	\$ 226	\$ 2,438	\$ 2,980	\$ 2,677	\$ 3,272	\$ 4,210	\$ 5,145					No	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C22-T2	Distribution System Inspection – CMP – 5 Year Detailed Inspections (HFTD Tier 2)	\$ 702	\$ 420	\$ 285	\$ 130	\$ 89	\$ 112	\$ 223	\$ 1,354	\$ 2,578	\$ 3,790	\$ 1,271	\$ 1,553	\$ 140	\$ 171	\$ 109	\$ 133	\$ 4,428	\$ 5,412	\$ 5,189	\$ 6,342	\$ 2,476	\$ 3,026					No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C23	Transmission System Inspection – Distribution System Inspection – IR/Corona (HFTD Tier 3)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 928	\$ 650	\$ 457	\$ 838	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 652	\$ 797	\$ 653	\$ 798	\$ 653	\$ 798					No	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C24-T1	Distribution System Inspection – IR/Corona (HFTD Tier 3)					\$ 175					\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C24-T2	Distribution System Inspection – IR/Corona (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ 104	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 157	\$ 192	\$ 157	\$ 192	\$ 157	\$ 192	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C25-T1	Distribution System Inspection – CMP – 10 Year Intrusive (HFTD Tier 3)					\$ 584					\$ 344	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C25-T2	Distribution System Inspection – CMP – 10 Year Intrusive (HFTD Tier 2)	\$ 103	\$ 425	\$ 1,258	\$ 1,239	\$ 300	\$ 7	\$ 110	\$ 1,091	\$ 2,572	\$ 177	\$ 754	\$ 921	\$ 4	\$ 4	\$ -	\$ -	\$ 1,395	\$ 1,705	\$ 577	\$ 705	\$ 294	\$ 360					No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C26	LIDAR Flights	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,394	\$ 1,703	\$ -	\$ -	\$ 1,620	\$ 1,980	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C27-T1	Distribution System Inspection – HFTD Tier 3 Inspections (HFTD Tier 3)					\$ 399					\$ 1,147	\$ 346	\$ 423	\$ 287	\$ 351	\$ 282	\$ 344	\$ 2,256	\$ 2,758	\$ 2,489	\$ 3,042	\$ 2,446	\$ 2,990					No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C27-T2	Distribution System Inspection – HFTD Tier 3 Inspections (HFTD Tier 2)	\$ 150	\$ 372	\$ 469	\$ 292	\$ 1	\$ 10	\$ 65	\$ 489	\$ 864	\$ 2	\$ -	\$ -	\$ 1	\$ 1	\$ 0	\$ 0	\$ -	\$ -	\$ 8	\$ 10	\$ 1	\$ 1					No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C28-T1	Distribution System Inspection – Drone Inspections (HFTD Tier 3)					\$ 51,953					\$ 15,899	\$ -	\$ -	\$ 2,025	\$ 2,475	\$ 2,025	\$ 2,475	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C28-T2	Distribution System Inspection – Drone Inspections (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ 13,382	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25,798	\$ 31,531	\$ -	\$ -	\$ -	\$ 10,085	\$ 12,326	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C29-T1	Distribution System Inspection – Circuit Ownership (HFTD Tier 3)					\$ -					\$ -	\$ 38	\$ 46	\$ 38	\$ 46	\$ 38	\$ 46	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C29-T2	Distribution System Inspection – Circuit Ownership (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 803	\$ 48	\$ 75	\$ 92	\$ 75	\$ 92	\$ 75	\$ 92	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C30-T1	Distribution System Inspection – CMP – Annual Patrol (HFTD Tier 3)					\$ 135					\$ 332	\$ 115	\$ 140	\$ 10	\$ 13	\$ 10	\$ 13	\$ 382	\$ 466	\$ 410	\$ 501	\$ 418	\$ 511					No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C30-T2	Distribution System Inspection – CMP – Annual Patrol (HFTD Tier 2)	\$ 26	\$ 27	\$ 40	\$ 215	\$ 160	\$ 6	\$ 18	\$ 310	\$ 4,904	\$ 394	\$ 136	\$ 166	\$ 12	\$ 15	\$ 12	\$ 15	\$ 453	\$ 554	\$ 487	\$ 595	\$ 497	\$ 607					No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C31-T1	Tree Trimming (HFTD Tier 3)					\$ 15,721					\$ -	\$ 12,415	\$ 15,174	\$ 13,427	\$ 16,411	\$ 14,521	\$ 17,748	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C31-T2	Tree Trimming (HFTD Tier 2)	\$ 14,710	\$ 14,606	\$ 17,398	\$ 20,609	\$ 18,954	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,968	\$ 18,295	\$ 16,188	\$ 19,786	\$ 17,508	\$ 21,398	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C32/M15-T1	Fuels Management Program (HFTD Tier 3)					\$ 5,805					\$ -	\$ 5,586	\$ 6,827	\$ 5,586	\$ 6,827	\$ 5,586	\$ 6,827	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C32/M15-T2	Fuels Management Program (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ 5,069	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C33/M16-T1	Enhanced Vegetation Management (HFTD Tier 3)					\$ 4,687					\$ -	\$ 4,362	\$ 5,366	\$ 4,493	\$ 5,527	\$ 4,637	\$ 5,668	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C33/M16-T2	Enhanced Vegetation Management (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ 5,548	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,182	\$ 6,300	\$ 5,338	\$ 6,488	\$ 5,489	\$ 6,708	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C34-T1	Pole Brushing (HFTD Tier 3)					\$ 2,549					\$ -	\$ 2,294	\$ 2,804	\$ 2,379	\$ 2,908	\$ 2,450	\$ 2,995	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C34-T2	Pole Brushing (HFTD Tier 2)	\$ 3,821	\$ 3,178	\$ 3,891	\$ 3,886	\$ 2,885	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,596	\$ 3,173	\$ 2,693	\$ 3,291	\$ 2,773	\$ 3,390	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C35-T1	Aviation Firefighting Program (HFTD Tier 3)					\$ 4,146					\$ 5,054	\$ 5,691	\$ 6,956	\$ 5,691	\$ 6,956	\$ 5,691	\$ 6,956	\$ 1,358	\$ 1,660	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C35-T2	Aviation Firefighting Program (HFTD Tier 2)					\$ 2,445					\$ 2,980	\$ 3,356	\$ 4,101	\$ 3,356	\$ 4,101	\$ 3,356	\$ 4,101	\$ 801	\$ 979	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C35-T3	Aviation Firefighting Program (Non-HFTD)	\$ 2,077	\$ 1,861	\$ 5,157	\$ 5,120	\$ 176	\$ -	\$ -	\$ -	\$ -	\$ 214	\$ 241	\$ 295	\$ 241	\$ 295	\$ 241	\$ 295	\$ 58	\$ 70	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C36-T1	Wildfire Infrastructure Protection Teams (HFTD Tier 3)					\$ 1,816					\$ -	\$ 1,855	\$ 2,267	\$ 1,855	\$ 2,267	\$ 1,855	\$ 2,267									No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C36-T2	Wildfire Infrastructure Protection Teams (HFTD Tier 2)	\$ 594	\$ 905	\$ 927	\$ 1,774	\$ 771	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 787	\$ 963	\$ 787	\$ 963	\$ 787	\$ 963	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C37-T1	PSPS Events and Mitigation of PSPP Impacts (HFTD Tier 3)					\$ -					\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C37-T2	PSPS Events and Mitigation of PSPP Impacts (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C38	Centralized Repository for Data	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23	\$ 10,214	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,004	\$ 25,671	\$ 21,035	\$ 25,709	\$ 14,539	\$ 17,770					No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C39	Asset Management	\$ -	\$ -	\$ 586	\$ 119	\$ 329	\$ -	\$ -	\$ -	\$ -	\$ 444	\$ 349	\$ 426	\$ 349	\$ 426	\$ 349	\$ 426	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C40	Wildfire Mitigation Personnel	\$ -	\$ -	\$ -	\$ 265	\$ 3,389	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,707	\$ 5,753	\$ 5,059	\$ 6,183	\$ 5,224	\$ 6,385	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C41	Emergency Management Operations	\$ 1,676	\$ 1,751	\$ 2,496	\$ 1,206	\$ 12,214	\$ -	\$ -	\$ -	\$ 252	\$ 2,846	\$ 10,938	\$ 13,369	\$ 10,938	\$ 13,369	\$ 10,938	\$ 13,369	\$ 8,418	\$ 10,289	\$ 1,683	\$ 2,057	\$ -	\$ -					No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C42	Communication Practices	\$ 165	\$ 105	\$ 196	\$ 3,045	\$ 8,675	\$ -	\$ -	\$ -	\$ 781	\$ 5,224	\$ 8,673	\$ 10,600	\$ 5,996	\$ 7,328	\$ 5,996	\$ 7,328	\$ 2,781	\$ 3,399	\$ -	\$ -	\$ -	\$ -					No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C43	Non-Conductive Balloon Alternatives	\$ -	\$ -	\$ -	\$ -	\$ 86	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 77	\$ 94	\$ 68	\$ 83	\$ 68	\$ 83	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	No				
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	A1	Alternative 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,118	\$ 6,255	\$ 17,618	\$ 21,533	\$ 19,575	\$ 23,925	\$ 196,837	\$ 240,578	\$ 587,250	\$ 717,750	\$ 652,500	\$ 797,500					No		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	A2	Alternative 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,250	\$ 2,750	\$ 9,963	\$ 12,177	\$ 11,070	\$ 13,530	\$ 86,400	\$ 105,600	\$ 332,100	\$ 405,900	\$ 369,000	\$ 451,000					No		

NOTES:

RAMP Chapter ID	RAMP Chapter Name	Control / Mitigation ID	Control / Mitigation Name	RECORDED DOLLARS										FORECAST DOLLARS										Shared Allocations (Yes/No)		
				O&M					Capital					2022		2023		2024		2022		2023			2024	
				2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High		\$ Low	\$ High
[1]	The figures provided are direct charges and do not include company loaders, with the exception of vacation and sick. The costs are also in 2020 dollars and have not been escalated to 2021 amounts.																									
[2]	Costs are provided, where available, for all activities regardless of whether a RSE analysis was performed.																									
[3]	Costs are not tracked by tranche (e.g., HFTD Tier 3, HFTD Tier 2). To represent costs in the tranches identified in the Chapter, SDG&E utilized the estimated units. This assumes cost per unit is consistent across the identified tranches.																									
[4]	Historical units are not available by tranche. Therefore, historical costs prior to 2020 are not separated by tranche.																									

2021 RAMP

SDG&E-Risk-1-WP

Risks Shared Allocations Workpaper

Tab: Shared Allocations

(2020 Direct \$000)

RAMP Chapter ID	RAMP Chapter Name	Control / Mitigation ID	Control / Mitigation Name	O&M Shared Allocations			
				Retained	SoCalGas	Sempra Energy	Other
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C1	WRRM - Ops	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C2	Advanced Weather Station Integration	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C3-T1	Wireless Fault Indicators (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C3-T2	Wireless Fault Indicators (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C3-T3	Wireless Fault Indicators (Non-HFTD)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C4	Fire Science and Climate Adaptation Department	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C5	High Performance Computing Infrastructure	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C6/M1-T1	SCADA Capacitors (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C6/M1-T2	SCADA Capacitors (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C7/M2-T1	Overhead Distribution Fire Hardening – Covered Conductor (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C7/M2-T2	Overhead Distribution Fire Hardening – Covered Conductor (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C8/M3-T1	Expulsion Fuse Replacement (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C8/M3-T2	Expulsion Fuse Replacement (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C9/M4-T1	PSPS Sectionalizing (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C9/M4-T2	PSPS Sectionalizing (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C9/M4-T3	PSPS Sectionalizing (Non-HFTD)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C10/M5-T1	Microgrids (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C10/M5-T2	Microgrids (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C11/M6-T1	Advanced Protection (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C11/M6-T2	Advanced Protection (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C12/M7-T1	Hotline Clamps (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C12/M7-T2	Hotline Clamps (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C13/M8-T1	Resiliency Grant Programs (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C13/M8-T2	Resiliency Grant Programs (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C14/M9-T1	Standby Power Programs (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C14/M9-T2	Standby Power Programs (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C15/M10-T1	Resiliency Assistance Programs (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C15/M10-T2	Resiliency Assistance Programs (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C16/M11-T1	Strategic Undergrounding (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C16/M11-T2	Strategic Undergrounding (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C17/M12-T1	Overhead Distribution Fire Hardening – Bare Conductor (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C17/M12-T2	Overhead Distribution Fire Hardening – Bare Conductor (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C17/M12-T3	Overhead Distribution Fire Hardening – Bare Conductor (Non-HFTD)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C18/M13-T1	Overhead Transmission Fire Hardening – Distribution Underbuilt (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C18/M13-T2	Overhead Transmission Fire Hardening – Distribution Underbuilt (HFTD Tier 2)	100%	0%	0%	0%

RAMP Chapter ID	RAMP Chapter Name	Control / Mitigation ID	Control / Mitigation Name	O&M Shared Allocations			
				Retained	SoCalGas	Sempra Energy	Other
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C19-T1	Cleveland National Forest Fire Hardening (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C19-T2	Cleveland National Forest Fire Hardening (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C20	LTE Communication Network	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C21/M14-T1	Lightning Arrestor Removal/Replacement Program (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C21/M14-T2	Lightning Arrestor Removal/Replacement Program (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C22-T1	Distribution System Inspection – CMP – 5 Year Detailed Inspections (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C22-T2	Distribution System Inspection – CMP – 5 Year Detailed Inspections (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C23	Transmission System Inspection	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C24-T1	Distribution System Inspection – IR/Corona (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C24-T2	Distribution System Inspection – IR/Corona (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C25-T1	Distribution System Inspection – CMP – 10 Year Intrusive (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C25-T2	Distribution System Inspection – CMP – 10 Year Intrusive (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C26	LiDAR Flights	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C27-T1	Distribution System Inspection – HFTD Tier 3 Inspections (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C27-T2	Distribution System Inspection – HFTD Tier 3 Inspections (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C28-T1	Distribution System Inspection – Drone Inspections (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C28-T2	Distribution System Inspection – Drone Inspections (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C29-T1	Distribution System Inspection – Circuit Ownership (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C29-T2	Distribution System Inspection – Circuit Ownership (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C30-T1	Distribution System Inspection – CMP – Annual Patrol (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C30-T2	Distribution System Inspection – CMP – Annual Patrol (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C31-T1	Tree Trimming (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C31-T2	Tree Trimming (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C32/M15-T1	Fuels Management Program (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C32/M15-T2	Fuels Management Program (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C33/M16-T1	Enhanced Vegetation Management (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C33/M16-T2	Enhanced Vegetation Management (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C34-T1	Pole Brushing (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C34-T2	Pole Brushing (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C35-T1	Aviation Firefighting Program (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C35-T2	Aviation Firefighting Program (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C35-T3	Aviation Firefighting Program (Non-HFTD)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C36-T1	Wildfire Infrastructure Protection Teams (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C36-T2	Wildfire Infrastructure Protection Teams (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C37-T1	PSPS Events and Mitigation of PSPS Impacts (HFTD Tier 3)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C37-T2	PSPS Events and Mitigation of PSPS Impacts (HFTD Tier 2)	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C38	Centralized Repository for Data	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C39	Asset Management	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C40	Wildfire Mitigation Personnel	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C41	Emergency Management Operations	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C42	Communication Practices	100%	0%	0%	0%

RAMP Chapter ID	RAMP Chapter Name	Control / Mitigation ID	Control / Mitigation Name	O&M Shared Allocations			
				Retained	SoCalGas	Sempra Energy	Other
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C43	Non-Conductive Balloon Alternatives	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	A1	Alternative 1	100%	0%	0%	0%
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	A2	Alternative 2	100%	0%	0%	0%

2021 RAMP
SDG&E-Risk-1-WP
Risks Recorded and Forecast Costs After Allocations Workpaper
Tab: After Allocations\$
(2020 Direct \$000)

RAMP Chapter ID	RAMP Chapter Name	Control / Mitigation ID	Control / Mitigation Name	RECORDED DOLLARS										FORECAST DOLLARS																	
				O&M					Capital					O&M					Capital												
				2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2022		2023		2024		2022		2023		2024							
														\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High						
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C1	WRRM - Ops	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 325	\$ 1,385	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,693	\$ 2,070	\$ 2,117	\$ 2,587	\$ 2,646	\$ 3,234	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C2	Advanced Weather Station Integration	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 561	\$ 1,032	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 503	\$ 614	\$ 561	\$ 686	\$ 561	\$ 686	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C3-T1	Wireless Fault Indicators (HFTD Tier 3)													\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C3-T2	Wireless Fault Indicators (HFTD Tier 2)													\$ 838	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C3-T3	Wireless Fault Indicators (Non-HFTD)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6	\$ 981	\$ 469	\$ 826	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 590	\$ 722	\$ -	\$ -	\$ -	\$ -
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C4	Fire Science and Climate Adaptation Department	\$ 1,400	\$ 1,747	\$ 2,627	\$ 1,809	\$ 3,363	\$ -	\$ -	\$ -	\$ -	\$ 4	\$ 424	\$ 3,256	\$ 3,980	\$ 3,700	\$ 4,523	\$ 3,700	\$ 4,523	\$ 272	\$ 333	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C5	High Performance Computing Infrastructure	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,579	\$ 8,041	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C6/M1-T1	SCADA Capacitors (HFTD Tier 3)													\$ 344	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C6/M1-T2	SCADA Capacitors (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50	\$ 290	\$ 213	\$ 195	\$ 688	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,612	\$ 1,970	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C7/M2-T1	Overhead Distribution Fire Hardening - Covered Conductor (HFTD Tier 3)													\$ 1,101	\$ 1,845	\$ 2,255	\$ 2,962	\$ 3,620	\$ 2,962	\$ 3,620	\$ 70,848	\$ 86,592	\$ 113,921	\$ 139,237	\$ 113,921	\$ 139,237			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C7/M2-T2	Overhead Distribution Fire Hardening - Covered Conductor (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 593	\$ 405	\$ 495	\$ 650	\$ 795	\$ 650	\$ 795	\$ 15,552	\$ 19,008	\$ 25,007	\$ 30,564	\$ 25,007	\$ 30,564					
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C8/M3-T1	Expulsion Fuse Replacement (HFTD Tier 3)													\$ 3,558	\$ 2,081	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C8/M3-T2	Expulsion Fuse Replacement (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 156	\$ 4,210	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,771	\$ 3,387	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C9/M4-T1	PSPS Sectionalizing (HFTD Tier 3)													\$ 588	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 161	\$ 196	\$ 161	\$ 197	\$ 161	\$ 197		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C9/M4-T2	PSPS Sectionalizing (HFTD Tier 2)													\$ 3,203	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 876	\$ 1,071	\$ 876	\$ 1,071	\$ 876	\$ 1,071		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C9/M4-T3	PSPS Sectionalizing (Non-HFTD)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,345	\$ 1,282	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 351	\$ 428	\$ 351	\$ 429	\$ 351	\$ 429			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C10/M5-T1	Microgrids (HFTD Tier 3)													\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C10/M5-T2	Microgrids (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ 371	\$ -	\$ -	\$ -	\$ 207	\$ 3,608	\$ 1,284	\$ 1,570	\$ 1,284	\$ 1,570	\$ 1,284	\$ 1,570	\$ 11,621	\$ 14,204	\$ 11,340	\$ 13,860	\$ 11,340	\$ 13,860						
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C11/M6-T1	Advanced Protection (HFTD Tier 3)													\$ 9,164	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,858	\$ 12,049	\$ 8,853	\$ 10,820	\$ 8,853	\$ 10,820		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C11/M6-T2	Advanced Protection (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,917	\$ 3,974	\$ 1,198	\$ 3,608	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C12/M7-T1	Hotline Clamps (HFTD Tier 3)					\$ 956								\$ -	\$ 1,944	\$ 2,376	\$ 1,944	\$ 2,377	\$ 164	\$ 201	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C12/M7-T2	Hotline Clamps (HFTD Tier 2)	\$ 1,900	\$ 1,096	\$ 1,069	\$ 950	\$ 2,343	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,944	\$ 2,376	\$ 1,944	\$ 2,377	\$ 164	\$ 201	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C13/M8-T1	Resiliency Grant Programs (HFTD Tier 3)					\$ 1,692								\$ -	\$ 2,370	\$ 2,895	\$ 2,370	\$ 2,895	\$ 2,370	\$ 2,897	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C13/M8-T2	Resiliency Grant Programs (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ 587	\$ 3,384	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,740	\$ 5,795	\$ 4,740	\$ 5,795	\$ 4,740	\$ 5,793	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C14/M9-T1	Standby Power Programs (HFTD Tier 3)					\$ 1,754								\$ -	\$ 9,315	\$ 11,385	\$ 4,163	\$ 5,088	\$ 4,163	\$ 5,088	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C14/M9-T2	Standby Power Programs (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C15/M10-T1	Resiliency Assistance Programs (HFTD Tier 3)					\$ 304								\$ -	\$ 658	\$ 804	\$ 324	\$ 396	\$ 324	\$ 396	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C15/M10-T2	Resiliency Assistance Programs (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ 456	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 987	\$ 1,206	\$ 486	\$ 594	\$ 486	\$ 594	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C16/M11-T1	Strategic Undergrounding (HFTD Tier 3)													\$ 27,512	\$ 3,199	\$ 3,909	\$ 5,170	\$ 6,319	\$ 5,993	\$ 7,324	\$ 123,023	\$ 150,361	\$ 198,843	\$ 243,031	\$ 230,484	\$ 281,703			
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C16/M11-T2	Strategic Undergrounding (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 200	\$ 11,384	\$ 1,919	\$ 2,346	\$ 3,102	\$ 3,791	\$ 3,596	\$ 4,395	\$ 73,814	\$ 90,217	\$ 119,306	\$ 145,818	\$ 138,290	\$ 169,022					
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C17/M12-T1	Overhead Distribution Fire Hardening - Bare Conductor (HFTD Tier 3)					\$ 1,447								\$ 57,969	\$ 117	\$ 143	\$ -	\$ -	\$ -	\$ -	\$ 4,500	\$ 5,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C17/M12-T2	Overhead Distribution Fire Hardening - Bare Conductor (HFTD Tier 2)					\$ 1,861								\$ 74,531	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C17/M12-T3	Overhead Distribution Fire Hardening - Bare Conductor (Non-HFTD)	\$ 955	\$ 1,162	\$ -	\$ -	\$ 138	\$ 61,690	\$ 61,133	\$ 57,331	\$ 128,219	\$ 5,521	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C18/M13-T1	Overhead Transmission Fire Hardening - Distribution Underbuilt (HFTD Tier 3)													\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,809	\$ 3,433	\$ -	\$ -	\$ -	\$ -		
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C18/M13-T2	Overhead Transmission Fire Hardening - Distribution Underbuilt (HFTD Tier 2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 474	\$ 1,169	\$ 1,094	\$ 3,084	\$ 5,038	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,805	\$ 22,983	\$ 10,734	\$ 13,120	\$ 8,065	\$ 9,857		

RAMP Chapter ID	RAMP Chapter Name	Control / Mitigation ID	Control / Mitigation Name	RECORDED DOLLARS										FORECAST DOLLARS											
				O&M					Capital					O&M					Capital						
				2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2022		2023		2024		2022		2023		2024	
														\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C41	Emergency Management Operations	\$ 1,676	\$ 1,751	\$ 2,496	\$ 1,206	\$ 12,214	\$ -	\$ -	\$ -	\$ 252	\$ 2,846	\$ 10,938	\$ 13,369	\$ 10,938	\$ 13,369	\$ 10,938	\$ 13,369	\$ 8,418	\$ 10,289	\$ 1,683	\$ 2,057	\$ -	\$ -
SDG&E-Risk-1	Wildfires Involving SDG&E Equipment	C42	Communication Practices	\$ 165	\$ 105	\$ 196	\$ 3,045	\$ 8,675	\$ -	\$ -	\$ -	\$ 781	\$ 5,224	\$ 8,673	\$ 10,600	\$ 5,996	\$ 7,328	\$ 5,996	\$ 7,328	\$ 2,781	\$ 3,399	\$ -	\$ -	\$ -	\$ -
SDG&E-Risk-1	Equipment	C43	Non-Conductive Balloon Alternatives	\$ -	\$ -	\$ -	\$ -	\$ 86	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 77	\$ 94	\$ 68	\$ 83	\$ 68	\$ 83	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SDG&E-Risk-1	Equipment	A1	Alternative 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,118	\$ 6,255	\$ 17,618	\$ 21,533	\$ 19,575	\$ 23,925	\$ 196,837	\$ 240,578	\$ 587,250	\$ 717,750	\$ 652,500	\$ 797,500
SDG&E-Risk-1	Equipment	A2	Alternative 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,250	\$ 2,750	\$ 9,963	\$ 12,177	\$ 11,070	\$ 13,530	\$ 86,400	\$ 105,600	\$ 332,100	\$ 405,900	\$ 369,000	\$ 451,000
NOTES:																									
[1] The figures provided are direct charges and do not include company loaders, with the exception of vacation and sick. The costs are also in 2020 dollars and have not been escalated to 2021 amounts.																									
[2] Costs are provided, where available, for all activities regardless of whether a RSE analysis was performed.																									
[3] Costs are not tracked by tranche (e.g., HFTD Tier 3, HFTD Tier 2). To represent costs in the tranches identified in the Chapter, SDG&E utilized the estimated units. This assumes cost per unit is consistent across the identified tranches.																									
[4] Historical units are not available by tranche. Therefore, historical costs prior to 2020 are not separated by tranche.																									

