

## Risk Assessment and Mitigation Phase

(Chapter SCG/SDG&E-Risk-6-WP)

Cybersecurity

Workpapers

May 17, 2021

2021 RAMP SCG/SDG&E-Risk-6-WP Risks Recorded and Forecast Costs Incurred Allocations Workpaper Tab: Incurred\$ (2020 Direct \$000)

						RECO	ORDED D	OLLARS										FORE	CAST DOLLA	ARS							
						0&M						Capital					0&	м									
		Control / Mitigation			2017	2018	201	19 20	120	2016	2017	2018	2019	2020	20	22	20	023	20	024	2	2022		2023	20:	24	Shared Allocations
RAMP Chapter ID	RAMP Chapter Name	ID	Control / Mitigation Name	2020	2027	2010				2020	2027	2010	2023	2020	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	(Yes/No)
SCG/SDG&E-Risk-6	Cybersecurity	C1	Perimeter Defenses	\$ 64	\$ 158	\$ 155	5 \$ :	126 \$	191 \$	603	\$ 573	\$ 5,125	\$ 4,679	\$ 12,600	\$ 399	\$ 509	\$ 399	\$ 509	\$ 399	\$ 509	\$ 6,143	\$ 7,849	\$ 5,198	\$ 6,641 \$	8,100	\$ 10,350	Yes
SCG/SDG&E-Risk-6	Cybersecurity	C2	Internal Defenses	\$ 153	\$ 240	\$ 124	4 \$ :	101 \$	153 \$	1,301	\$ 908	\$ 13,463	\$ 5,182	\$ 7,750	\$ 369	\$ 472	\$ 369	\$ 472	\$ 369	\$ 472	\$ 4,491	\$ 5,739	\$ 7,702	\$ 9,842 \$	7,938	\$ 10,143	Yes
SCG/SDG&E-Risk-6	Cybersecurity	C3	Sensitive Data Protection	\$ 128	\$ 176	\$ 62	2 \$	50 \$	76 \$	1,936	\$ 105	\$ -	\$ -	\$ -	\$ 210	\$ 268	\$ 210	\$ 268	\$ 210	\$ 268	\$ 3,994	\$ 5,103	\$ 4,095	\$ 5,233 \$	5,040	\$ 6,440	Yes
SCG/SDG&E-Risk-6	Cybersecurity	C4	Operational Technology (OT) Cybersecurity	\$ 51	\$ 126	\$ 124	4 \$ :	101 \$	153 \$	- 1	\$ 38	\$ 0	\$ 1,573	\$ 13	\$ 319	\$ 407	\$ 319	\$ 407	\$ 319	\$ 407	\$ 4,867	\$ 6,219	\$ 5,513	\$ 7,044 \$	4,410	\$ 5,635	No
			Obsolete Information Technology (IT) Infrastructure and Application																							i	
SCG/SDG&E-Risk-6	Cybersecurity	C5	Replacement	\$ 64	\$ 158	\$ 155	5 \$ :	126 \$	191 \$	2,982	\$ 3,326	\$ 73	\$ 2,375	\$ 362	\$ 399	\$ 509	\$ 399	\$ 509	\$ 399	\$ 509	\$ 5,040	\$ 6,440	\$ 5,276	\$ 6,742 \$	6,300	\$ 8,050	Yes
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NOTES:																											
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[1] The figures provided are	direct charges and do not include company loade	rs, with the exception	of vacation and sick. The costs are also in 2020 dollars and have not be	en escalate	d to 2021 a	mounts.	4														1		1			'	
[3] Costs are provided when	re available, for all activities regardless of whether	a BCE analysis was no	formed																							1 '	

2021 RAMP SCG/SDG&E-Risk-6-WP Risks Shared Allocations Workpaper Tab: Shared Allocations

(2020 Direct \$000)

			O&M Shared	O&M Shared Allocations 2016 - 2024			Capital Shared Allocations 2016					Capita	I Shared Allo	ocations 2	217	Capital St	ared Allo	cations 2018		apital Shares	Allocations	2019		apital Share	d Allocatio	ns 2020		Capital Shared Allocations 2022				Capital Shared Allocations 2023					Capital Sha	Shared Allocations 20		
apter ID	RAMP Chapter Name	Control / Mitigation ID		Retained SDG		iempra inergy Ot	R	etained	SDG&E	Sempr		er Ret	tained 5		Sempra Energy	Other	tetained SDG		empra nergy Other	Retained	SDG&E	Sempra Energy	Other	Retained	SDG&E	Semp Energ		er Retai	ned SD	G&E	Sempra Energy	Other	Retained	SDG&E	Sempra Energy	Other	Retain	ed SDG8	Semp Ener	
E-Risk-6	bersecurity	C1	Perimeter Defenses	53.70% 4	12.30%	4.00%	0%	58%	38%	4	4%	0%	58%	38%	4%	0%	57%	39%	4% 09	57	% 395	6 49	09	6 51	46	56	3%	0%	54%	42%	4%	0%	54%	42	6 496	05	16 5	4%	42%	4%
AE-Risk-6	bersecurity	C2	Internal Defenses	53.70% 4	12.30%	4.00%	0%	55%	42%	4	4%	0%	57%	39%	4%	0%	58%	38%	4% 09	59	% 379	49	09	6 59	6 37	%	4%	0%	54%	42%	4%	0%	54%	42	6 4%	05	16 5	4%	42%	4%
E-Risk-6	bersecurity	C3	Sensitive Data Protection	53.70% 4	12.30%	4.00%	0%	57%	39%	4	4%	0%	57%	39%	4%	0%	0%	0%	0% 09	0	% 0:	6 09	09	6 0	6 0	%	0%	0%	54%	42%	4%	0%	54%	42	456	05	K 5	4%	42%	4%
	bersecurity	C4	Operational Technology (OT) Cybersecurity	53.70% 4	12.30%	4.00%	0%	0%	0%		0%	0%	100%	0%	0%	0%	100%	0%	0% 09	100	% 0	6 09	09	6 100	6 0	%	0%	0%	100%	0%	0%	0%	100%		6 0%	01	10	0%	0%	0%
	bersecurity	CS	Obsolete Information Technology (IT) Infrastructure and Application	53.70% 4	12.30%	4.00%	0%	62%	35%	4	4%	0%	60%	36%	4%	0%	60%	36%	4% 09	57	% 395	6 49	09	6 57	6 39	%	4%	0%	54%	42%	4%	0%	54%	42	6 496	05	16 5	4%	12%	4%
																																-								-

NOTES: CSS (Corporate Shared Service) shares costs with SDGE, SCG, and Sempra Corporate. All mitigations have cost centers that use the CSS sharing percentages.

2021 RAMP
SCG/SDG&E-Risk-6-WP
Risks Recorded and Forecast Costs After Allocations Workpaper
Tab: After Allocations\$
JOAN DIRECT MODES

						0&M		RECORDED			Capital					0&			FORECA	Capital						
			1			U&IVI					Capitai															
		Control /		2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	202	2	20	023	202	4	202	22	2	023	2	024	
AMP Chapter ID	RAMP Chapter Name	Mitigation ID	Control / Mitigation Name											\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ High	\$ Low	\$ Hi	
G/SDG&E-Risk-	Cybersecurity	C1	Perimeter Defenses	\$ 576	\$ 710	\$ 834	\$ 783	\$ 1,032	\$ 347	\$ 330	\$ 2,944	\$ 2,693	\$ 8,037	\$ 1,251	\$ 1,599	\$ 1,251	\$ 1,599	\$ 1,251 5	\$ 1,599	\$ 3,300	\$ 4,217	\$ 2,793	\$ 3,568	\$ 4,352	! \$	
G/SDG&E-Risk-	Cybersecurity	C2	Internal Defenses	\$ 1,309	\$ 2,069	\$ 3,247	\$ 2,498	\$ 3,124	\$ 704	\$ 517	\$ 8,034	\$ 2,952	\$ 4,658	\$ 3,158	\$ 4,035	\$ 3,158	\$ 4,035	\$ 3,158 \$	\$ 4,035	\$ 2,413	\$ 3,083	\$ 4,138	\$ 5,288	\$ 4,265	\$	
G/SDG&E-Risk-		C3	Sensitive Data Protection	\$ 840	\$ 1,553	\$ 2,649	\$ 1,938	\$ 2,377	\$ 1,102	\$ 60		\$ -	\$ -				\$ 3,004							\$ 2,708		
S/SDG&E-Risk-	Cybersecurity	C4	Operational Technology (OT) Cybersecurity	\$ 482	\$ 639	\$ 767	\$ 719	\$ 896	\$ -	\$ 38	\$ 0	\$ 1,573	\$ 127	\$ 1,066	\$ 1,362	\$ 1,066	\$ 1,362	\$ 1,066	\$ 1,362	\$ 4,867	\$ 6,219	\$ 5,513	\$ 7,044	\$ 4,410	\$	
S/SDG&E-Risk-			Obsolete Information Technology (IT) Infrastructure and Application																							
	Cybersecurity	CE	Replacement	\$ 651	\$ 773	e enn	\$ 830	¢ 1 000	¢ 1 0/4	¢ 1 006	¢ 44	¢ 1 252	¢ 206	¢ 1 207	¢ 1 657	¢ 1 207	¢ 1667	¢ 1 207 1	¢ 1657	¢ 2.700	¢ 2.460	¢ 2020	\$ 3,622	\$ 3,389	5 \$	
	cysciaccurty	LG.	replacement	y 031	, ,,,	) J 030	7 050	7 1,003	3 1,040	J 1,550	2 44	2 1,332	J 200	3 1,237	\$ 1,037	3 1,237	\$ 1,037	J 1,237 .	\$ 1,037	\$ 2,708	3 3,400	3 2,033	y 3,022	y 5,50.	2   2	
		that were retained at S	CG and costs that were sent to SCG from SDGE & Sempra Corporate. For					•					\$ 200	3 1,237	\$ 1,037	\$ 1,257	\$ 1,037	, 1,237	3 1,037	\$ 2,708	3 3,400	3 2,033	J 3,011	2 3,30.	9   9	
TES: The after a	llocation O&M costs are a combination of costs			the cyber	chapter in p	particular, a	large portion	•					3 200	3 1,237	3 1,037	3 1,297	3 1,037	3 1,237	3 1,037	\$ 2,708	3 3,400	, 2,033	7 3,011	9 3,30.	,	
TES: The after a	llocation O&M costs are a combination of costs	pany loaders, with the e	CG and costs that were sent to SCG from SDGE & Sempra Corporate. For exception of vacation and sick. The costs are also in 2020 dollars and have	the cyber	chapter in p	particular, a	large portion	•					3 200	J 1,237	J 1,037	3 1,237	3 1,037	3 1,237	3 1,037	\$ 2,708	3 3,400	, 2,033	7 3,022	y djallo	2 2	
TES: The after a	llocation O&M costs are a combination of costs ided are direct charges and do not include com	pany loaders, with the e	CG and costs that were sent to SCG from SDGE & Sempra Corporate. For exception of vacation and sick. The costs are also in 2020 dollars and have	the cyber	chapter in p	particular, a	large portion	•					, 200	J 1,237	3 1,037	3 1,237	2 1,037	, 1,237	3 1,037	\$ 2,706	3,400	3 2,033	9 3,022	φ		

2021 RAMP SCG/SDG&E-Risk-6-WP Risks Recorded and Forecast Units Workpaper Tab: Units

									RECORD	ED UNITS					FORECAST UNITS												
						O&M Capital											08	:M			Capital						
RAMP Chapter	RAMP Chapter Control /		Units D	Units Description		2017	2018	2019	2020	2016	2017	2018	2019	2020	2022		2	023	20	2024		122	20	023	202	24	
RAMP Chapter ID Name	Mitigation ID	Control / Mitigation Name	Capital	O&M	2010	2027	2020	2013	2020	2010	2017	2020	2023	2020	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	
SCG/SDG&E-Risk-6 Cybersecurity	C1	Perimeter Defenses	No Feasible Units	No Feasible Units	-	-	-	-		-		-	-		-	-	-	-	-		-		-	-	-	- '	
SCG/SDG&E-Risk-6 Cybersecurity	C2	Internal Defenses	No Feasible Units	No Feasible Units	-	-	-	-		-		-	-		-	-	-	-	-		-		-	-	-		
SCG/SDG&E-Risk-6 Cybersecurity	C3	Sensitive Data Protection	No Feasible Units	No Feasible Units			-				-			-	-		-	-			-		-	-	-	-	
SCG/SDG&E-Risk-6 Cybersecurity	C4	Operational Technology (OT) Cybersecurity	No Feasible Units	No Feasible Units	-	-	-	-	-	-	-	-	-		-	-	-	-		-	-			-	-	- '	
		Obsolete Information Technology (IT) Infrastructure and Application																								1	
SCG/SDG&E-Risk-6 Cybersecurity	C5	Replacement	No Feasible Units	No Feasible Units	-	-	-	-		-	-	-	-	-	-	-		-	-	-	-	ا ا		-	-	- '	