



**Risk Assessment and Mitigation Phase
Cross-Functional Factor**

(SCG-CFF-4-WP)

**Foundational Technology Systems
Workpapers**

May 17, 2021

2021 RAMP
 SCG-CFF-4-WP
 Cross-Functional Factors Recorded and Forecast Costs Incurred Workpaper
 Tab: Incurred\$
 (2020 Direct \$000)

CFF Volume ID	CFF Name	Line No.	Project / Program Description	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						
SCG/SDG&E-CFF-4	Foundational Technology Systems	1	Data Center Modernization	\$ 810	\$ 876	\$ 697	\$ 1,242	\$ 1,308	\$ 15,438	\$ 30,172	\$ 16,381	\$ 49,585	\$ 41,547	\$ 1,177	\$ 1,504	\$ 1,177	\$ 1,504	\$ 1,177	\$ 1,504	\$ 19,364	\$ 24,743	\$ 19,440	\$ 24,840	\$ 26,730	\$ 34,155	Yes	
SCG/SDG&E-CFF-4	Foundational Technology Systems	6	IT Service Continuity	\$ 990	\$ 1,021	\$ 955	\$ 671	\$ 792	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 712	\$ 910	\$ 712	\$ 910	\$ 712	\$ 910	\$ 4,735	\$ 6,050	\$ 4,860	\$ 6,210	\$ 4,860	\$ 6,210	No	
SCG/SDG&E-CFF-4	Foundational Technology Systems	7	Cloud Resiliency Services	\$ 711	\$ 624	\$ 176	\$ 73	\$ -	\$ 1,404	\$ -	\$ 17,280	\$ -	\$ -	\$ 769	\$ 982	\$ 3,453	\$ 4,413	\$ 3,453	\$ 4,413	\$ 782	\$ 1,000	\$ 1,043	\$ 1,333	\$ 1,304	\$ 1,666	Yes	
SCG/SDG&E-CFF-4	Foundational Technology Systems	2	Network & Voice System Resiliency	\$ 44	\$ 63	\$ 320	\$ 543	\$ 559	\$ 6,027	\$ 8,739	\$ 8,569	\$ 6,463	\$ 12,375	\$ 503	\$ 643	\$ 503	\$ 643	\$ 503	\$ 643	\$ 17,102	\$ 21,852	\$ 13,557	\$ 17,323	\$ 11,340	\$ 14,490	Yes	
SCG/SDG&E-CFF-4	Foundational Technology Systems	3	Monitoring Systems and Services	\$ 236	\$ 293	\$ 287	\$ 613	\$ 1,212	\$ -	\$ -	\$ 2,397	\$ 2,439	\$ 4,223	\$ 2,125	\$ 2,715	\$ 2,575	\$ 3,290	\$ 2,575	\$ 3,290	\$ 4,947	\$ 6,322	\$ 3,327	\$ 4,252	\$ 4,050	\$ 5,175	Yes	
SCG/SDG&E-CFF-4	Foundational Technology Systems	4	Gas Operations Systems Resiliency	\$ 2,446	\$ 2,650	\$ 3,204	\$ 2,996	\$ 3,142	\$ 21,980	\$ 11,117	\$ 25,379	\$ 31,200	\$ 23,289	\$ 2,828	\$ 3,613	\$ 2,828	\$ 3,613	\$ 2,828	\$ 3,613	\$ 39,791	\$ 50,843	\$ 36,279	\$ 46,356	\$ 42,000	\$ 53,666	Yes	
SCG/SDG&E-CFF-4	Foundational Technology Systems	8	Emergency Operations Center (EOC) Technology Resiliency	\$ 34	\$ 52	\$ 202	\$ 138	\$ 160	\$ -	\$ -	\$ 2,228	\$ 2,613	\$ 1,424	\$ 144	\$ 184	\$ 144	\$ 184	\$ 144	\$ 184	\$ 1,075	\$ 1,373	\$ 1,215	\$ 1,553	\$ 1,215	\$ 1,553	Yes	
SCG/SDG&E-CFF-4	Foundational Technology Systems	5	End User Access and Support Services	\$ 591	\$ 451	\$ 1,716	\$ 715	\$ 805	\$ 5,593	\$ 12,574	\$ 38	\$ 2,233	\$ 43	\$ 1,064	\$ 1,360	\$ 1,064	\$ 1,360	\$ 1,064	\$ 1,360	\$ 15,210	\$ 19,435	\$ 15,210	\$ 19,435	\$ -	\$ -	Yes	
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.																											

2021 RAMP
 SCG-CFF-4-WP
 Cross-Functional Factors Recorded and Forecast Costs Shared Allocations Workpaper
 Tab: Shared Allocations - O&M
 (2020 Direct \$000)

CFF Volume ID	CFF Name	Line No.	Project / Program Description	Cost Center Type	O&M Shared Allocations				O&M Notes
					Retained	SDG&E	Sempra Energy	Other	
SCG/SDG&E-CFF-4	Foundational Technology Systems	1	Data Center Modernization	CSS	54%	42%	4%	0%	Any CCs that are shared used this methodology
SCG/SDG&E-CFF-4	Foundational Technology Systems	1	Datacenter Modernization	NSS	100%	0%	0%	0%	Any CCs that are non-shared used this methodology
SCG/SDG&E-CFF-4	Foundational Technology Systems	6	IT Service Continuity	CSS	54%	42%	4%	0%	Any CCs that are shared used this methodology
SCG/SDG&E-CFF-4	Foundational Technology Systems	6	IT Service Continuity	NSS	100%	0%	0%	0%	Any CCs that are non-shared used this methodology
SCG/SDG&E-CFF-4	Foundational Technology Systems	7	Cloud Resiliency Services	CSS	54%	42%	4%	0%	Any CCs that are shared used this methodology
SCG/SDG&E-CFF-4	Foundational Technology Systems	2	Network & Voice System Resiliency	NSS	100%	0%	0%	0%	Any CCs that are non-shared used this methodology
SCG/SDG&E-CFF-4	Foundational Technology Systems	2	Network & Voice System Resiliency	CSS	54%	42%	4%	0%	Any CCs that are shared used this methodology
SCG/SDG&E-CFF-4	Foundational Technology Systems	3	Monitoring Systems and Services	CSS	54%	42%	4%	0%	Any CCs that are shared used this methodology
SCG/SDG&E-CFF-4	Foundational Technology Systems	3	Monitoring Systems and Services	NSS	100%	0%	0%	0%	Any CCs that are non-shared used this methodology
SCG/SDG&E-CFF-4	Foundational Technology Systems	4	Gas Operations Systems Resiliency	NSS	100%	0%	0%	0%	Any CCs that are non-shared used this methodology
SCG/SDG&E-CFF-4	Foundational Technology Systems	4	Gas Operations Systems Resiliency	CSS	54%	42%	4%	0%	Any CCs that are shared used this methodology
SCG/SDG&E-CFF-4	Foundational Technology Systems	4	Gas Operations Systems Resiliency	USS	56%	44%	0%	0%	Any CCs that are shared used this methodology
SCG/SDG&E-CFF-4	Foundational Technology Systems	8	Emergency Operations Center (EOC) Technology Resiliency	CSS	54%	42%	4%	0%	Any CCs that are shared used this methodology
SCG/SDG&E-CFF-4	Foundational Technology Systems	5	End User Access and Supporting Services	CSS	54%	42%	4%	0%	Any CCs that are shared used this methodology
SCG/SDG&E-CFF-4	Foundational Technology Systems	5	End User Access and Support Services	NSS	100%	0%	0%	0%	Any CCs that are non-shared used this methodology

NOTES: Each mitigation had some cost centers that were shared and some that were non-shared, we used the respective allocation percentages based on that identifier. CSS (Corporate Shared Service) shares costs with SDGE, SCG, and Sempra Corporate. USS (Utility Shared Service) shares costs with SDGE and SCG. NSS (Non-Shared Service) means that the costs remain in full at SCG.

2021 RAMP
 SCG-CFF-4-WP
 Cross-Functional Factors Recorded and Forecast Costs After Allocations Workpaper
 Tab: After Allocations\$
 (2020 Direct \$000)

CFF Volume ID	CFF Name	Line No.	Project / Program Description	RECORDED DOLLARS										FORECAST DOLLARS												
				O&M					Capital					O&M				Capital				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	
SCG/SDG&E-CFF-4	Foundational Technology Systems	1	Data Center Modernization	\$1,678	\$ 1,728	\$ 1,636	\$ 2,188	\$ 2,276	\$ 8,792	\$ 18,050	\$ 14,900	\$ 32,466	\$ 24,944	\$ 2,049	\$ 2,618	\$ 2,049	\$ 2,618	\$ 2,049	\$ 2,618	\$ 19,364	\$ 24,743	\$ 19,440	\$ 24,840	\$ 26,730	\$ 34,155	
SCG/SDG&E-CFF-4	Foundational Technology Systems	6	IT Service Continuity	\$2,976	\$ 2,838	\$ 3,069	\$ 2,299	\$ 2,709	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,555	\$ 3,265	\$ 2,555	\$ 3,265	\$ 2,555	\$ 3,265	\$ 4,735	\$ 6,090	\$ 4,860	\$ 6,210	\$ 4,860	\$ 6,210	
SCG/SDG&E-CFF-4	Foundational Technology Systems	7	Cloud Resiliency Services	\$711	\$ 665	\$ 409	\$ 133	\$ 203	\$ 799	\$ -	\$ 16,503	\$ -	\$ -	\$ 1,215	\$ 1,553	\$ 3,900	\$ 4,984	\$ 3,989	\$ 5,097	\$ 782	\$ 1,000	\$ 1,043	\$ 1,333	\$ 1,304	\$ 1,666	
SCG/SDG&E-CFF-4	Foundational Technology Systems	2	Network & Voice System Resiliency	\$3,244	\$ 3,562	\$ 4,462	\$ 3,659	\$ 3,862	\$ 6,385	\$ 9,362	\$ 8,426	\$ 6,380	\$ 10,880	\$ 3,476	\$ 4,442	\$ 3,476	\$ 4,442	\$ 3,476	\$ 4,442	\$ 15,766	\$ 20,146	\$ 13,069	\$ 16,700	\$ 11,340	\$ 14,490	
SCG/SDG&E-CFF-4	Foundational Technology Systems	3	Monitoring Systems and Services	\$390	\$ 453	\$ 534	\$ 761	\$ 1,583	\$ -	\$ -	\$ 1,379	\$ 1,404	\$ 2,535	\$ 1,980	\$ 2,530	\$ 2,222	\$ 2,839	\$ 2,222	\$ 2,839	\$ 2,863	\$ 3,658	\$ 1,858	\$ 2,374	\$ 2,349	\$ 3,002	
SCG/SDG&E-CFF-4	Foundational Technology Systems	4	Gas Operations Systems Resiliency	\$4,813	\$ 6,304	\$ 9,784	\$ 6,628	\$ 6,526	\$ 17,250	\$ 10,653	\$ 22,857	\$ 29,190	\$ 20,068	\$ 5,873	\$ 7,505	\$ 5,873	\$ 7,505	\$ 5,873	\$ 7,505	\$ 35,633	\$ 45,531	\$ 33,832	\$ 43,230	\$ 39,585	\$ 50,581	
SCG/SDG&E-CFF-4	Foundational Technology Systems	8	Emergency Operations Center (EOC) Technology Resiliency	\$443	\$ 493	\$ 654	\$ 641	\$ 983	\$ -	\$ -	\$ 1,381	\$ 1,766	\$ 1,424	\$ 884	\$ 1,130	\$ 884	\$ 1,130	\$ 884	\$ 1,130	\$ 1,075	\$ 1,373	\$ 1,215	\$ 1,563	\$ 1,215	\$ 1,553	
SCG/SDG&E-CFF-4	Foundational Technology Systems	5	End User Access and Support Services	\$1,361	\$ 1,362	\$ 1,964	\$ 1,535	\$ 1,640	\$ 3,184	\$ 7,216	\$ 1,480	\$ 1,640	\$ 1,513	\$ 1,724	\$ 2,203	\$ 1,724	\$ 2,203	\$ 1,724	\$ 2,203	\$ 15,210	\$ 19,435	\$ 15,210	\$ 19,435	\$ -	\$ -	
NOTES: The after allocation O&M costs are a combination of costs that were retained at SCG and costs that were sent to SCG from SDGE & Sempra Corporate.																										
[2] 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.																										
[3] Costs are provided, where available, for all activities regardless of whether a RSE analysis was performed.																										