

Study Area: San Diego Area Sub-Transmission

Thermal Overloads



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)								Potential Mitigation Solutions
					2018 Summer Peak	2021 Summer Peak	2026 Summer Peak	2018 Spring Off-Peak	2021 Spring Light Load	2018 Summer Peak with no Behind-the-meter PV	2021 SP Heavy Renewable & Min Gas Gen	2026 Summer Peak with no Behind-the-meter PV	
SD-T-1	22324 GLENCLIF 69.0 22328 GLNCLFTP 69.0 1 1	Base Case	P0	Base Case								124.71	Radial Line, Further Investigation
SD-T-2	22612 OTAYLAKE 69.0 22080 BORDERTP 69.0 1 1	Base Case	P0	Base Case								109.89	Radial Line, Further Investigation
SD-T-3	22324 GLENCLIF 69.0 22328 GLNCLFTP 69.0 1 1	TL06957_TL06957 LOVELAND-BARRETT ck 1	P1	L-1								130.18	Radial Line, Further Investigation
SD-T-4	22612 OTAYLAKE 69.0 22080 BORDERTP 69.0 1 1	50003_OCOTILLO - SUNCREST ck 1	P1	L-1								111.28	Radial Line, Further Investigation
SD-T-5	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1 1	TL23006_TL23006 SANLUSRY - SONGS ck 1	P1	L-1				101.98					Upgrade Talega Tap - Stuart Tap 69 kV, as previously approved, in 2018, SPS to trip TL 695 in the interim
SD-T-6	22324 GLENCLIF 69.0 22328 GLNCLFTP 69.0 1 1	Bus_LL69_Loveland 69kV Bus	P2	Loss of Bus								142.62	Crestwood SPS
SD-T-7	22064 BLDCRKTP 69.0 22168 DESCANSO 69.0 1 1	Bus_LL69_Loveland 69kV Bus	P2	Loss of Bus				101.15	119.41				Crestwood SPS
SD-T-8	22064 BLDCRKTP 69.0 22736 SANTYSBL 69.0 1 1	Bus_LL69_Loveland 69kV Bus	P2	Loss of Bus				100.8	119.1				Crestwood SPS
SD-T-9	22841 LAGNA NL TAP 138 22396 LAGNA NL 138 1 1	Bus_PI138E_Pico 138kV E Bus	P2	Loss of Bus	113.06					118.6			SOCRE project as previously approved in transmission plan, Operation Procedure in the interim
SD-T-10	22306 GARFIELD 69.0 22208 EL CAJON 69.0 1 1	Bus_MY69N_Murray 69kV N Bus	P2	Loss of Bus	104.11	103.68	99.44			113.4	107.9	115.04	Operation procedure/ SPS for Load Shedding in Murray
SD-T-11	22160 DEL MAR 69.0 22164 DELMARTP 69.0 1 1	Bus_DM69E_Del Mar 69kV E Bus	P2	Loss of Bus	107.13					112.74			Load redistribution in 2021 and 2026 cases, Operation Procedure/SPS in the interim to shed load in del Mar
SD-T-12	22020 AVOCADO 69.0 22508 MNSRATTP 69.0 1 1	Bus_MN69_Monserate 69kV S Bus	P2	Loss of Bus	92.06			109.73		91.69			Operation Procedure/SPS to shed load in Monserate
SD-T-13	22664 POMERADO 69.0 22828 SYCAMORE 69.0 2 1	Bus_SX69S_Sycamore 69kV S Bus	P2	Loss of Bus	104.02		92.36			108.5	90.32	101.88	Operation Procedure/SPS to shed load in Pomerado
SD-T-14	22644 PENSQTOS 69.0 22164 DELMARTP 69.0 1 1	Bus_PQ69SE_Penasquitos 69kV SE Bus	P2	Loss of Bus	104.23					107.98			Operation Procedure/SPS to shed load in TOREYPNS
SD-T-15	22040 BARRETT 69.0 22104 CAMERON 69.0 1 1	Bus_DE69_Descanso 69kV Bus	P2	Loss of Bus				96.53	107.58				Crestwood SPS

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SD-T-16	22588 OCNSDETP 69.0 22808 STUARTTP 69.0 1 1	SPS8.2_69kV TL695A at TA	P2	Loss of Bus			91.59					107.11	Operation Procedure/ SPS to open the line
SD-T-17	22740 SANYS德罗 69.0 22616 OTAYLKTP 69.0 1 1	Bus_OY69E_Otay 69kV E Bus	P2	Loss of Bus	105.45	96.76	96.49			104.66	97.01	93.85	Operation Procedure/SPS to shed load in SANYS德罗
SD-T-18	22200 DUNHILTP 69.0 22188 DOUBLTTP 69.0 1 1	Bus_PQ69SE_Penasquitos 69kV SE Bus	P2	Loss of Bus	100.88					104.29			Operation Procedure/SPS to shed load in TOREYPNS
SD-T-19	22188 DOUBLTTP 69.0 22164 DELMARTP 69.0 1 1	Bus_PQ69SE_Penasquitos 69kV SE Bus	P2	Loss of Bus	100.88					104.29			Operation Procedure/SPS to shed load in TOREYPNS
SD-T-20	22040 BARRETT 69.0 22416 LOVELAND 69.0 1 1	Bus_DE69_Descanso 69kV Bus	P2	Loss of Bus				91.45	104.25				Crestwood SPS
SD-T-21	22046 BASILONE 69.0 22848 TALEGATP 69.0 1 1	SPS3.8_500kV TL50001 (IV-ECO-ML) GEN DROP SPS	P2	Loss of Bus	95.46					102.86			Upgrade Talega Tap - Stuart Tap 69 kV, as previously approved, in 2018, SPS to trip TL 695 in the interim
SD-T-22	22046 BASILONE 69.0 22848 TALEGATP 69.0 1 1	TL0690C_TL0690C OCNSDETP-STUARTTP ck 1	P2.1	L-1	110.69			99.03		119.57			Upgrade Talega Tap - Stuart Tap 69 kV, as previously approved, in 2018, SPS to trip TL 695 in the interim
SD-T-23	22768 BAY BLVD 69.0 22516 MONTGMRY 69.0 1 1	TL0642A_TL0642A MONTGYTP-BAY BLVD ck 1	P2.1	L-1		107.93	108.47				111.53	119.54	Upgrade Montgomery-Bay Blvd/ Operation Procedure to radialize Montgomery substation pre-contingency
SD-T-24	22020 AVOCADO 69.0 22508 MNSRATTP 69.0 1 1	TL0698B_TL0698B MONSRATE-MNSRATTP ck 1	P2.1	L-1				111.45					Upgrade the Avocado-Monsrate tap segment/ Operation Procedure to radialize Avocado substation pre-contingency
SD-T-25	22040 BARRETT 69.0 22104 CAMERON 69.0 1 1	TL0629C_TL0629C CRESTWD-GLNCLFTP ck 1	P2.1	L-1				99.99	107.2				Crestwood SPS
SD-T-26	22040 BARRETT 69.0 22416 LOVELAND 69.0 1 1	TL0629C_TL0629C CRESTWD-GLNCLFTP ck 1	P2.1	L-1				94.88	103.89				Crestwood SPS
SD-T-27	22740 SANYS德罗 69.0 22616 OTAYLKTP 69.0 1 1	TL0649A_TL0649A OTAY-OTAYLKTP ck 1	P2.1	L-1	102.91	94.94	94.67			99.95	94.46		Border SPS
SD-T-28	22324 GLENCLIF 69.0 22328 GLNCLFTP 69.0 1 1	TL06957 LOVELAND-BARRETT ck 1 AND KUMEYAAY_1	P3	G-1, N-1								139.07	Radial Line, Further Investigation



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					2018 Summer Peak	2021 Summer Peak	2026 Summer Peak	2018 Spring Off-Peak	2021 Spring Light Load	2018 Summer Peak with no Behind-the-meter PV	2021 SP Heavy Renewable & Min Gas Gen	2026 Summer Peak with no Behind-the-meter PV	
SD-T-29	22046 BASILONE 69.0 22848 TALEGATP 69.0 1 1	50002 N.GILA-IMPRLVLY ck 1 AND IVGEN1	P3	G-1, N-1	105.65					115.13			Upgrade Talega Tap - Stuart Tap 69 kV, as previously approved, in 2018, SPS to trip TL 695 in the interim
SD-T-30	22612 OTAYLAKE 69.0 22080 BORDERTP 69.0 1 1	50005_IMPRLVLY - OCOTILLO ck 1 AND ML-SC_MIGUEL SYN CON 1 & 2	P3	G-1, N-1								112.93	Radial Line, Further Investigation
SD-T-31	22168 DESCANSO 69.0 22328 GLNCLFTP 69.0 1 1	TL06957 LOVELAND-BARRETT ck 1 AND KUMEYAAY_1	P3	G-1, N-1								109.7	Preferred Resources, DG and Operation Procedure
SD-T-32	22208 EL CAJON 69.0 22408 LOSCOCHS 69.0 1 1	OPEN GRANITE-LOS COCHES-MIGUEL AND Switch on Non-coincident Peak Load at JM/EC/GA AND EC GEN1	P3	G-1, N-1	96.37			94.27		100.17			Load redistribution in 2021 and 2026 cases, Operation Procedure/SPS in the interim to shed load in Granite
SD-T-33	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1 1	SA-1T_SANLUSRY 230 kV 1T CB	P4	L-2				148.05					Upgrade Talega Tap - Stuart Tap 69 kV, as previously approved, in 2018, SPS to trip TL 695 in the interim
SD-T-34	22612 OTAYLAKE 69.0 22080 BORDERTP 69.0 1 1	ML7013_ML 7013 CB - BK 80&81	P4	T-1,T-1								111.53	Radial Line, Further Investigation
SD-T-35	22064 BLDCRKTP 69.0 22736 SANTYSBL 69.0 1 1	TL6914NW MIGUEL-LOVELAND ck 1 AND TL0678 LOSCOCHS-ALPINE ck 1	P6	L-1-1		160.62	160.23				167.03	228.87	Operation Procedure to open Loveland-Alpine after 1st contingency
SD-T-36	22064 BLDCRKTP 69.0 22168 DESCANSO 69.0 1 1	TL6914NW MIGUEL-LOVELAND ck 1 AND TL0678 LOSCOCHS-ALPINE ck 1	P6	L-1-1		160.86	160.38				167.27	228.82	Operation Procedure to open Loveland-Alpine after 1st contingency
SD-T-37	22420 SILVERGT 69.0 22548 NATNLCTY 69.0 1 1	TL23026 SILVERGT - BAY BLVD ck 1 AND TL0603A NSM-SW ck 1	P6	L-1-1		142.97	141.76				146.54	153.02	Operation Procedure to open the Line after 1st contingency
SD-T-38	22548 NATNLCTY 69.0 22820 SWEETWTR 69.0 1 1	TL23026 SILVERGT - BAY BLVD ck 1 AND TL0603A NSM-SW ck 1	P6	L-1-1		141.43	140.26				144.99	152.08	Operation Procedure to open the Line after 1st contingency
SD-T-39	22324 GLENCLIF 69.0 22328 GLNCLFTP 69.0 1 1	TL06904 LOVELAND-ALPINE ck 1 AND TL6914NW MIGUEL-LOVELAND ck 1	P6	L-1-1								151.05	Operation Procedure to radialize Loveland Substation after 1st contingency
SD-T-40	22820 SWEETWTR 69.0 22520 MONTGYTP 69.0 1 1	TL23026 SILVERGT - BAY BLVD ck 1 AND TL0644 BAY BLVD - SWEETWTR ck 1	P6	L-1-1	112.3	129.45	127.52	100.38		115.18	133.42	141.79	Operation Procedure, Open the Line after 1st contingency
SD-T-41	22856 TOREYPNS 69.0 22864 UCM 69.0 1 1	TL06905 GENESEE -PENSQTOS ck 2 AND TL06959 MIRASNT0-PENSQTOS ck 1	P6	L-1-1	137.41	134.72	113.91	95.02		140.87	139.79	122.4	Operation Procedure, radialize Genesee substation after 1st contingency



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SD-T-42	22644 PENSQTOS 69.0 22444 MESA RIM 69.0 2 1	TL06916 SYCAMORE-SCRIPPS ck 1 AND LD_MRM OPEN 675 PEAK MRM/MR/SS	P6	L-1-1	104.46	113.3	116.83	101.7	136.34	112.21	114.09	129.73	Operation Procedure, re-configure systems after 1st contingency, load shed after second contingency, monitor non-coincident peak load growth
SD-T-43	22316 GENESEE 69.0 22644 PENSQTOS 69.0 2 1	TL069 TOREYPNS to UCM ck 1 AND TL06959 MIRASNT0-PENSQTOS ck 1	P6	L-1-1	132.13	129.11	108.89	90.91		135.49	134.04	117.07	Operation Procedure, radialize Genesee and UCM substation after 1st contingency
SD-T-44	22768 BAY BLVD 69.0 22820 SWEETWTR 69.0 1 1	TL23026 SILVERGT - BAY BLVD ck 1 AND TL0642 MONTGMRY-SWEETWTRW-BAY BLVD ck 1	P6	L-1-1	131.54	108.2	106.6	117.37		134.98	111.54	118.61	Operation Procedure to open Sweetwater-NationalCity-NAVSTMTR line after 1st contingency
SD-T-45	22331 MIRASNT0 69.0 22644 PENSQTOS 69.0 1 1	TL06905 GENESEE -PENSQTOS ck 2 AND TL069 TOREYPNS to UCM ck 1	P6	L-1-1	130.67	127.91	108.16	90.15		133.93	132.72	116.15	Operation Procedure, radialize Genesee and UCM substation after 1st contingency
SD-T-46	22841 LAGNA NL TAP 138 22396 LAGNA NL 138 1 1	13816/13831_CP-PI + TA-RMV 138kV w/non-coincd peak	P6	L-1-1	125.99			127.85		130.74			SOCRE project as previously approved in transmission plan, Operation Procedure in the interim
SD-T-47	22252 ENCNITAS 69.0 22160 DEL MAR 69.0 1 1	TL0616A B C: Lkhodges-BERNARDO-RSF ck 1 AND TL06952 NORTHCTY-PENSQTOS 69 ck 1	P6	L-1-1	119.4					128.93			Artesen 230/69 kV Transformer to mitigate for long term, Operation Procedure in the interim to radialize NorthCity and R.SNTTP substation
SD-T-48	22708 SANLUSRY 69.0 22582 OCEAN RANCH 69.0 1 1	LD_ME OPEN 693 PEAK ME/SM AND TL693 SANLUSRY to MELROSE ck 1	P6	L-1-1			117.52					128.42	Operation Procedure, preferred resources and to re-configure systems after 1st contingency, monitor non-coincident peak load growth
SD-T-49	22440 MELROSE 69.0 22708 SANLUSRY 69.0 1 1	TL69XX OCEAN RANCH to SANLUSRY ck 1 AND LD_ME OPEN 693 PEAK ME/SM	P6	L-1-1			116.67					127.77	Operation Procedure, preferred resources and to re-configure systems after 1st contingency, monitor non-coincident peak load growth
SD-T-50	22884 WARNERS 69.0 22688 RINCON 69.0 1 1	TL0681 ASH-FE-VC ck 1 AND TL0683 RINCON-LILAC ck 1	P6	L-1-1	100.4	103.56	93.63			127.11	107.37	124.08	Operation Procedure to radialize Rincon substation after first contingency



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SD-T-51	22112 CAPSTRNO 138 22656 PICO 138 1 1	TL13833 CAPSTRNO-TRABUCO ck 1 AND TL13838 R.MSNVJO-MARGARTA ck 1	P6	L-1-1	120.46			106.33		125.57			SOCRE project as previously approved in transmission plan, Operation Procedure in the interim
SD-T-52	22664 POMERADO 69.0 22828 SYCAMORE 69.0 2 1	TL23051 SYCAMORE - ARTESN ck 1 AND TL06915 POMERADO -SYCAMORE ck 1	P6	L-1-1		107.22	111.67				111.2	124.43	Operation Procedure to radialize Pomerado after the 1st contingency
SD-T-53	22664 POMERADO 69.0 22828 SYCAMORE 69.0 1 1	TL23051 SYCAMORE - ARTESN ck 1 AND TL06924 POMERADO -SYCAMORE ck 2	P6	L-1-1		107.22	111.67				111.2	124.43	Operation Procedure to radialize Pomerado after the 1st contingency
SD-T-54	22736 SANTYSBL 69.0 22152 CREELMAN 69.0 1 1	TL0635 CREELMAN - LOSCOCHS ck 1 AND TL06917 CREELMAN-SYCAMORE ck 1	P6	L-1-1	95.8	103.57	96.49			108.94	110.46	121.51	Operation Procedure to radialize Pomerado substation after first contingency
SD-T-55	22416 LOVELAND 69.0 22168 DESCANSO 69.0 1 1	TL6914NW MIGUEL-LOVELAND ck 1 AND TL0678 LOSCOCHS-ALPINE ck 1	P6	L-1-1		95.4	95.77				98.58	120.05	Operation Procedure to radialize Pomerado substation after first contingency
SD-T-56	22696 ROSE CYN 69.0 22140 CLARMTTP 69.0 1 1	TL0663 KEARNY -MISSION ck 1 AND TL0676 MESAHGTS-MISSION ck 1	P6	L-1-1	92.76	93.6	104.32				97.64	119.48	Upgrade Relay Rating on Rose Cyn end
SD-T-57	22556 NAVSTMTR 69.0 22824 SWTWTRTP 69.0 1 1	TL23026 SILVERGT - BAY BLVD ck 1 AND TL06949 SILVERGT-NATNLCTY 69 ck 1	P6	L-1-1	107.85			118.67		107.17			Operation Procedure, Open the Line after 1st contingency
SD-T-58	22272 ESCO 69.0 22876 WARCYNTP 69.0 1 1	TL0633 BERNARDO-R.CARMEL ck 1 AND TL06913 POWAY-POMERADO ck 1	P6	L-1-1	114					116.45			Poway-Pomerado Line 2, Operation Procedure in the interim
SD-T-59	22524 MORHILTP 69.0 22440 MELROSE 69.0 1 1	TL0698 MN-AV-PA ck 1 AND TL06912 PENDLETN-SANLUSRY ck 1	P6	L-1-1	104.99	95.29	99.24			114.32	98.87	113.65	Re-configuration of systems in 2021 and 26 reduces load in the affected area to mitigate, Operation Procedure to radialize Pendleton and Avocado in the interim
SD-T-60	22440 MELROSE 69.0 22708 SANLUSRY 69.0 2 1	TL0684 ESCNDIDO-SANMRCOS ck 1 AND LD_ME OPEN 680A PEAK ME	P6	L-1-1	105.54					113.69			Operation Procedure to radialize San Marcos, re-distribution of load in 2021 and 2026 cases





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SD-T-61	22484 MIRAMAR1 69.0 22296 FENTONTP 69.0 1 1	TL06916 SYCAMORE-SCRIPPS ck 1 AND LD_MRM OPEN 675 PEAK MRM/MR/SS	P6	L-1-1	99.81	106.94	105.46	99.07		104.44	107.36	113.52	Operation Procedure, re-configure systems after 1st contingency, load shed after second contingency, monitor non-coincident peak load growth
SD-T-62	22192 DOUBLTTP 138 22300 FRIARS 138 1 1	TL23013 PENSQTOS - OT ck 1 AND SX - PQ 230 ck 1	P6	L-1-1	107.62			113.48		105.8			Mission-PQ line to mitigate, Operation Procedure to re-dispatch Generation in the interim
SD-T-63	22768 BAY BLVD 69.0 22520 MONTGYTP 69.0 1 1	TL0641 SOUTHBAY - MONTGMRY ck 1 AND TL0644 BAY BLVD - SWEETWTR ck 1	P6	L-1-1		101.1	101.69				104.45	111.66	Operation Procedure to radialize Montgomery after 1st contingency
SD-T-64	22668 POWAY 69.0 22876 WARCYNTP 69.0 1 1	TL0633 BERNARDO-R.CARMEL ck 1 AND TL06913 POWAY-POMERADO ck 1	P6	L-1-1	108.65					111.08			Poway-Pomerado Line 2, Operation Procedure in the interim
SD-T-65	22480 MIRAMAR 69.0 22296 FENTONTP 69.0 1 1	TL06916 SYCAMORE-SCRIPPS ck 1 AND LD_MRM OPEN 675 PEAK MRM/MR/SS	P6	L-1-1	97.16	104.9	102.8	96.58		101.77	105.25	110.83	Operation Procedure, re-configure systems after 1st contingency, load shed after second contingency, monitor non-coincident peak load growth
SD-T-66	22040 BARRETT 69.0 22104 CAMERON 69.0 1 1	TL0629 CW-DE-GC ck 1 AND TL0678 LOSCOCHS-ALPINE ck 1	P6	L-1-1					110.62				Crestwood SPS
SD-T-67	22208 EL CAJON 69.0 22408 LOSCOCHS 69.0 1 1	TL0624 EL CAJON-JAMACHA ck 1 AND LD_GR OPEN 632 PK JM/EC/GA	P6	L-1-1	103.31					110.39			Operation Procedure to radialize Granite in the interim, re-configure of load in 2021 and 2026 cases
SD-T-68	22256 ESCNDIDO 69.0 22724 SANMRCOS 69.0 1 1	TL23011 PEN 230 - SANLUSRY SC ck1 AND TL23030 ESCNDIDO-TALEGA ck 1	P6	L-1-1				109.06					Escondido-San Marcos Ck 2, as previously approved, in 2018, Operation Procedure in the interim
SD-T-69	22476 MIGUELTP 69.0 22456 MIGUEL 69.0 1 1	TL23042 BAY BLVD-OTAYMESA-MIGUEL AND TL0621 PARADISE-MIGUEL ck 1	P6	L-1-1	105.52					108.95			Escondido-San Marcos Ck 2, as previously approved, in 2018, Operation Procedure in the interim
SD-T-70	22160 DEL MAR 69.0 22644 PENSQTOS 69.0 2 1	TL0610 DEL MAR-PENSQTOS ck 1 AND TL06952 NORTHCTY-PENSQTOS 69 ck 1	P6	L-1-1		103.19	95.72				107.3	108.78	Operation Procedure to radialize North City and Encinitas after 1st contingency



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SD-T-71	22331 MIRASNT0 69.0 22316 GENESEE 69.0 1 1	TL06905 GENESEE -PENSQTOS ck 2 AND TL069 TOREYPNS to UCM ck 1	P6	L-1-1	102.21	104.81	90.3			104.33	108.73		Operation Procedure, radialize Genesee and UCM substation after 1st contingency
SD-T-72	22644 PENSQTOS 69.0 22164 DELMARTP 69.0 1 1	TL0662 PENSQTOS -TOREYPNS ck 1 AND TL06959 MIRASNT0-PENSQTOS ck 1	P6	L-1-1	104.3	96.36				108.04	99.99		Operation procedure to radialize TOREYPNS and MIRASNT0 after 1st contingency
SD-T-73	22656 PICO 138 22860 TRABUCO 138 1 1	13816/13831_CP-PI + TA-RMV 138kV w/non-coincd peak	P6	L-1-1	103.3			104.62		107.58			SOCRE project as previously approved in transmission plan, Operation Procedure in the interim
SD-T-74	22040 BARRETT 69.0 22416 LOVELAND 69.0 1 1	TL0629 CW-DE-GC ck 1 AND TL0678 LOSCOCHS-ALPINE ck 1	P6	L-1-1					107.25				Crestwood SPS
SD-T-75	22442 MELRSETP 69.0 22724 SANMRCOS 69.0 1 1	TL0684 ESCNDIDO-SANMRCOS ck 1 AND LD_ME OPEN 693 PEAK ME/SM	P6	L-1-1	99.21			99.49		106.78			Escondido-San Marcos Ck 2, as previously approved, in 2018, Operation Procedure in the interim
SD-T-76	22160 DEL MAR 69.0 22644 PENSQTOS 69.0 1 1	TL0667 DEL MAR-PENSQTOS ck 2 AND TL06952 NORTHCTY-PENSQTOS 69 ck 1	P6	L-1-1		100.72	93.44				104.76	106.28	Operation Procedure to radialize North City and Encinitas after 1st contingency
SD-T-77	22844 TALEGA 230 22840 TALEGA 138 1 1	TA BK 61 230/138 AND TA BK 63 230/138	P6	T-1,T-1	100.44					105.9			Operation Procedure as an interim solution until SOCRE project in service
SD-T-78	22840 TALEGA 138 22656 PICO 138 1 1	TL13846 TA TAP33 TALEGA-SM-PICO ck 1 AND TL13838 R.MSNVJO-MARGARTA ck 1	P6	L-1-1	100.97					105.68			SOCRE project as previously approved in transmission plan, Operation Procedure in the interim
SD-T-79	22200 DUNHILTP 69.0 22188 DOUBLTTP 69.0 1 1	TL0662 PENSQTOS -TOREYPNS ck 1 AND TL06959 MIRASNT0-PENSQTOS ck 1	P6	L-1-1	101.03	101.32				104.44	105.14		Operation procedure to radialize TOREYPNS and MIRASNT0 after 1st contingency
SD-T-80	22188 DOUBLTTP 69.0 22164 DELMARTP 69.0 1 1	TL0662 PENSQTOS -TOREYPNS ck 1 AND TL06959 MIRASNT0-PENSQTOS ck 1	P6	L-1-1	101.03	101.32				104.44	105.14		Operation procedure to radialize TOREYPNS and MIRASNT0 after 1st contingency
SD-T-81	22656 PICO 138 22842 TA TAP33 138 1 1	13831/13836_TA-RMV + TA-PI 138kV w/non-coincd peak	P6	L-1-1	100.1			101.28		104.47			SOCRE project as previously approved in transmission plan, Operation Procedure in the interim

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Thermal Overloads



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)								Potential Mitigation Solutions	
					2018 Summer Peak	2021 Summer Peak	2026 Summer Peak	2018 Spring Off-Peak	2021 Spring Light Load	2018 Summer Peak with no Behind-the-meter PV	2021 SP Heavy Renewable & Min Gas Gen	2026 Summer Peak with no Behind-the-meter PV		
SD-T-82	22604 OTAY 69.0 22616 OTAYLKTP 69.0 1 1	TL0623 IB-OY-SYO ck 1 AND TL06910 SALT CREEK - BORDER ck 1	P6	L-1-1	102.2	100.92	103.99				96.05		Border SPS	
SD-T-83	22768 BAY BLVD 69.0 22516 MONTGMRY 69.0 1 1	TL23026 SILVERGT - BAY BLVD ck 1 AND TL0644 BAY BLVD - SWEETWTR ck 1	P6	L-1-1		94.18	92.89				97.19	103.92	Operation Procedure, Open the Line after 1st contingency, monitor load growth	
SD-T-84	22844 TALEGA 230 22840 TALEGA 138 3 1	TA BK 61 230/138 AND TA BK 63 230/138	P6	T-1,T-1	98.55					103.91			Operation Procedure as an interim solution until SOCRE project in service	
SD-T-85	22840 TALEGA 138 22842 TA TAP33 138 1 1	13831/13836_TA-RMV + TA-PI 138kV w/non-coincd peak	P6	L-1-1	98.82			99.93		103.14			SOCRE project as previously approved in transmission plan, Operation Procedure in the interim	
SD-T-86	22316 GENESEE 69.0 22864 UCM 69.0 1 1	TL0662 PENSQTOS -TOREYPNS ck 1 AND TL0666 PQ-DB-DH-TP ck 1	P6	L-1-1	97.56	99.32				100.61	103.08		Operation procedure to radialize TOREYPNS after 1st contingency	
SD-T-87	22548 NATNLCTY 69.0 22824 SWTWTRTP 69.0 1 1	TL23026 SILVERGT - BAY BLVD ck 1 AND TL0658 SAMPSON-DIVISION ck 1	P6	L-1-1	103.04					102.84			Operation Procedure, Open the Line after 1st contingency	
SD-T-88	22668 POWAY 69.0 22664 POMERADO 69.0 2 1	TL23051 SYCAMORE - ARTESN ck 1 AND TL06913 POWAY-POMERADO ck 1	P6	L-1-1			91.05					101.78	Operation procedure to radialize R. Carmel after 1st contingency, higher emergency rating	
SD-T-89	22256 ESCNDIDO 69.0 22272 ESCO 69.0 1 1	TL0633 BERNARDO-R.CARMEL ck 1 AND TL06913 POWAY-POMERADO ck 1	P6	L-1-1	97.54					101.56			Poway-Pomerado Line 2, Operation Procedure in the interim	
SD-T-90	22556 NAVSTMTR 69.0 22820 SWEETWTR 69.0 1 1	TL23026 SILVERGT - BAY BLVD ck 1 AND TL0603B/D NSM-SW ck 1	P6	L-1-1		93.2	93.82				95.56	100.9	Operation Procedure, Open the Line after 1st contingency, monitor load growth	
SD-T-91	22582 OCEAN RANCH 69.0 22440 MELROSE 69.0 1 1	LD_ME OPEN 693 PEAK ME/SM AND TL693 SANLUSRY to MELROSE ck 1	P6	L-1-1								100.36	Operation Procedure, monitor load growth	
SD-T-92	22680 R.SNTAFE 69.0 22685 R.SNTTP1 69.0 1 1	TL0660 ENCINITAS-DEL MAR ck 1 AND TL06952 NORTHCTY-PENSQTOS 69 ck 1	P6	L-1-1	94.5					100.16			Operation Procedure, monitor load growth	
SD-T-93	22840 TALEGA 138 22720 SANMATEO 138 1 1	13831/13836_TA-RMV + TA-PI 138kV w/non-coincd peak	P6	L-1-1		91.29	95		94.03		91.1	102.66	Operation Procedure, monitor load growth	
SD-T-94	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1 1	TL23007 TALEGA - SONGS ck 1 AND TL23052 TALEGA - S.ONOFRE ck 2	P7	L-2	184.04					197.86			Upgrade Talega Tap - Stuart Tap 69 kV, as previously approved, in 2018, SPS to trip TL 695 in the interim	





ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)								Potential Mitigation Solutions
					2018 Summer Peak	2021 Summer Peak	2026 Summer Peak	2018 Spring Off-Peak	2021 Spring Light Load	2018 Summer Peak with no Behind-the-meter PV	2021 SP Heavy Renewable & Min Gas Gen	2026 Summer Peak with no Behind-the-meter PV	
SD-T-95	22046 BASILONE 69.0 22848 TALEGATP 69.0 1 1	TL23007 TALEGA - SONGS ck 1 AND TL23052 TALEGA - S.ONOFRE ck 2	P7	L-2	140.13					148.58			Upgrade Talega Tap - Stuart Tap 69 kV, as previously approved, in 2018, SPS to trip TL 695 in the interim
SD-T-96	22368 JAP MESA 69.0 22400 LASPULGS 69.0 1 1	TL23007 TALEGA - SONGS ck 1 AND TL23052 TALEGA - S.ONOFRE ck 2	P7	L-2	128.77					138.19			Upgrade Talega Tap - Stuart Tap 69 kV, as previously approved, in 2018, SPS to trip TL 695 in the interim
SD-T-97	22046 BASILONE 69.0 22368 JAP MESA 69.0 1 1	TL23007 TALEGA - SONGS ck 1 AND TL23052 TALEGA - S.ONOFRE ck 2	P7	L-2	124.53					133.96			Upgrade Talega Tap - Stuart Tap 69 kV, as previously approved, in 2018, SPS to trip TL 695 in the interim
SD-T-98	22324 GLENCLIF 69.0 22328 GLNCLFTP 69.0 1 1	13824/6914NEW_JM-TC-ML60 138kV+ ML-LL 69 kV	P7	L-2								129.74	Radial Line, Further Investigation
SD-T-99	22612 OTAYLAKE 69.0 22080 BORDERTP 69.0 1 1	23054/23055_SX-SUNCREST ckt 1&2 230kv	P7	L-2								111.33	Radial Line, Further Investigation
SD-T-100	22306 GARFIELD 69.0 22208 EL CAJON 69.0 1 1	TL0618 MISSION-MURRAY ck 1 AND TL0619 MISSION-MURRAY ck 2	P7	L-2	104.13	103.68	99.44			113.4	107.91	115.04	prefered resources, operation procedure with higher emergency rating
SD-T-101	22160 DEL MAR 69.0 22164 DELMARTP 69.0 1 1	TL0610 DEL MAR-PENSQTOS ck 1 AND TL0667 DEL MAR-PENSQTOS ck 2	P7	L-2	107.15					112.76			Del Mar - North City line, as previously approved, in 2018, Operation Procedure in the interim to radialize Del Mar
SD-T-102	22588 OCNSDETP 69.0 22808 STUARTTP 69.0 1 1	TL23007 TALEGA - SONGS ck 1 AND TL23052 CAPSTRNO - S.ONOFRE ck 1	P7	L-2			91.59					107.11	Operation Procedure to open the line, monitor load growth
SD-T-103	22644 PENSQTOS 69.0 22164 DELMARTP 69.0 1 1	662/6905_PQ-TP + PQ-GE	P7	L-2	96.64					100.12	92.97		Operation Procedure, monitor load growth

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Voltage Deviations



ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %								Potential Mitigation Solutions
					2018 Summer Peak	2021 Summer Peak	2026 Summer Peak	2018 Spring Off-Peak	2021 Spring Light Load	2018 Summer Peak with no Behind-the-meter PV	2021 SP Heavy Renewable & Min Gas Gen	2026 Summer Peak with no Behind-the-meter PV	
SD-VD-1	22040 BARRETT 69 kV	TL06957_TL06957 LOVELAND-BARRETT ck 1	P1	L-1					-6.31			6.219	Turn on Reactor at Kumewaay
SD-VD-2	22104 CAMERON 69 kV	TL06923_TL06923 BARRETT -CAMERON ck 1	P1	L-1					-5.769				Turn on Reactor at Kumewaay
SD-VD-3	22680 R.SNTAFE 69 kV	TL0616A_TL0616A BERNARDO-R.SNTAFE ck 1	P1	L-1							5.438		Monitor Load Growth
SD-VD-4	22903 KUMEYAAY 69 kV	TL06958_TL06958 CRESTWOOD-CAMERON ck 1	P1	L-1				-5.077					Turn on Reactor at Kumewaay
SD-VD-5	22902 CRESTWD 69 kV	TL06958_TL06958 CRESTWOOD-CAMERON ck 1	P1	L-1				-5.072					Turn on Reactor at Kumewaay
SD-VD-6	22870 VALCNTR 69 kV	TL0681 ASH-FE-VC ck 1 AND TL0683 RINCON-LILAC ck 1	P6	L-1-1		10.624				15.486		10.626	Operation Procedure to radialize Rincon substation after first contingency
SD-VD-7	22688 RINCON 69 kV	TL0681 ASH-FE-VC ck 1 AND TL0683 RINCON-LILAC ck 1	P6	L-1-1		10.545				15.341		10.527	Operation Procedure to radialize Rincon substation after first contingency

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High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)								Potential Mitigation Solutions
					2018 Summer Peak	2021 Summer Peak	2026 Summer Peak	2018 Spring Off-Peak	2021 Spring Light Load	2018 Summer Peak with no Behind-the-meter PV	2021 SP Heavy Renewable & Min Gas Gen	2026 Summer Peak with no Behind-the-meter PV	
SD-V-1	22903 KUMEYAAY 69 kV	TL6958_TL6958 CW-CM	P1	L-1					1.1163				Turn on Reactor at Kumewaay
SD-V-2	22902 CRESTWD 69 kV	TL6958_TL6958 CW-CM	P1	L-1					1.1153				Turn on Reactor at Kumewaay
SD-V-3	22104 CAMERON 69 kV	TL06923_TL06923 BARRETT -CAMERON ck 1	P1	L-1					1.114				Turn on Reactor at Kumewaay
SD-V-4	22040 BARRETT 69 kV	TL06957_TL06957 LOVELAND-BARRETT ck 1	P1	L-1					1.1121				Turn on Reactor at Kumewaay
SD-V-5	22324 GLENCLIF 69 kV	TL6958_TL6958 CW-CM	P1	L-1					1.1061				Turn on Reactor at Kumewaay
SD-V-6	22328 GLNCLFTP 69 kV	TL6958_TL6958 CW-CM	P1	L-1					1.1061				Turn on Reactor at Kumewaay
SD-V-7	22688 RINCON 69 kV	TL0681 ASH-FE-VC ck 1 AND TL0683 RINCON-LILAC ck 1	P6	L-1-1		0.907				0.8757		0.9077	Operation Procedure to radialize Rincon substation after first contingency
SD-V-8	22870 VALCNTR 69 kV	TL0681 ASH-FE-VC ck 1 AND TL0683 RINCON-LILAC ck 1	P6	L-1-1		0.9001				0.867		0.8992	Operation Procedure to radialize Rincon substation after first contingency
SD-V-9	22736 SANTYSBL 69 kV	TL0635 CREELMAN - LOSCOCHS ck 1 AND TL06917 CREELMAN-SYCAMORE ck 1	P6	L-1-1							0.8944		Operation Procedure to radialize Pomerado substation after first contingency
SD-V-10	22152 CREELMAN 69 kV	TL0635 CREELMAN - LOSCOCHS ck 1 AND TL06917 CREELMAN-SYCAMORE ck 1	P6	L-1-1		0.8695					0.8481	0.8932	Operation Procedure to radialize Pomerado substation after first contingency

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Transient Stability



ID	Contingency	Category	Category Description	Transient Stability Performance							Potential Mitigation Solutions
				Select..	Select..	Select..	Select..	Select..	Select..	Select..	

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Single Contingency Load Drop

ID	Worst Contingency	Category	Category Description	Amount of Load Drop (MW)								Potential Mitigation Solutions
				Select..	Select..	Select..	Select..	Select..	Select..	Select..	Select..	
X-SLD-1												

No single contingency resulted in total load drop of more than 250 MW.



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Single Source Substation with more than 100 MW Load

ID	Substation	Load Served (MW)								Potential Mitigation Solutions
		Select..	Select..	Select..	Select..	Select..	Select..	Select..	Select..	
X-SS-1										

No single source substation with more than 100 MW Load