

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 SANYSDDRO 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 SANYSDDRO
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 SANYSDDRO 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..	



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.



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