

2013/2014 ISO Reliability Assessment - Preliminary Study Results

Study Area: **San Diego Area - Summer Peak**

Thermal Overloads



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-1	22356 IMPRLVLY 230 21025 ELCENTRO 230 1	L_50006_Line N.GILA 500.0 to IMPRLVLY 500.0 Ckt 1	B	L-1	100%			
SD-A-SP-T-2	22356 IMPRLVLY 230 21025 ELCENTRO 230 1	L_50006_Line N.GILA 500.0 to IMPRLVLY 500.0 Ckt 1 With OtayMesa Outage	B	G-1/L-1	110%	109%		
SD-A-SP-T-3	22356 IMPRLVLY 230 21025 ELCENTRO 230 1 (PSLF)	L_50006_Line N.GILA 500.0 to IMPRLVLY 500.0 Ckt 1 with TMD Plant outage	B	G-1/L-1	113%	107%		
SD-A-SP-T-4	22609 OTAYMESA 230 22464 MIGUEL 230 1	L_20023_Line OTAYMESA 230.0 to MIGUEL 230.0 Ckt 2	B	L-1		112%		Post-SONGS Transmission Strengthen Plan including following alternatives under investigation
SD-A-SP-T-5	22609 OTAYMESA 230 22464 MIGUEL 230 2	L_20022_Line OTAYMESA 230.0 to MIGUEL 230.0 Ckt 1	B	L-1		112%		Alt A: Build SDGE 500 kV backbone system by looping with SCE 500 kV System from Valley/Aberhills/Serrano to Telega/SanLuisRey/Rainbow/ Escondido/Suncrest
SD-A-SP-T-6	22610 OTAYME&1 230 20149 TJI-230 230 1	L_20060_Line SYCAMORE TP1 230.0 to SYCAMORE 230.0 Ckt 1 With OtayMesa Outage	B	G-1/L-1		103%		Alt B: Build submarine cable system between SCE and SDGE
SD-A-SP-T-7	22610 OTAYME&1 230 20149 TJI-230 230 1	L_20061_Line SYCAMORE TP2 230.0 to SYCAMORE 230.0 Ckt 2 With OtayMesa Outage	B	G-1/L-1		103%		Alt C: Build DC system to strengthen the SDGE main system
SD-A-SP-T-8	22610 OTAYME&1 230 20149 TJI-230 230 1	L_45002_Line PALOVRDE 500.0 to COLRIVER 500.0 Ckt 1 With OtayMesa Outage	B	G-1/L-1		103%		Alt D: Improve SDGE 230 kV system to accommodate main system strengthening

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SD-A-SP-T-9	22610 OTAYME&1 230 20149 TJI-230 230 1	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	L-1	103%	109%		<p>Alt E: To coordinate with IID/CFE and possibly consider policy driven network upgrades associated along with main system strengthening</p> <p>Alt F: DG, demand response, generation redispatch, and import curtailment will be evaluated as part of mitigations along with other network mitigations for the main system and the local 69 kV areas</p> <p>NOTE: Above alternatives are not mutually exclusive; it is highly likely to require a combination of alternatives to address all systems issues</p>
SD-A-SP-T-10	22610 OTAYME&1 230 20149 TJI-230 230 1	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1 With OtayMesa Outage	B	G-1/L-1	108%	121%	101%	
SD-A-SP-T-11	22610 OTAYME&1 230 20149 TJI-230 230 1	L_50005_Line IMPRLVLY 500.0 to ECO 500.0 Ckt 1	B	L-1	122%	123%	107%	
SD-A-SP-T-12	22610 OTAYME&1 230 20149 TJI-230 230 1	L_50005_Line IMPRLVLY 500.0 to ECO 500.0 Ckt 1 With OtayMesa Outage	B	G-1/L-1	129%	139%	122%	
SD-A-SP-T-13	22610 OTAYME&1 230 20149 TJI-230 230 1	L_50007_Line OCOTILLO 500.0 to SUNCREST 500.0 Ckt 1	B	L-1	103%	109%		
SD-A-SP-T-14	22610 OTAYME&1 230 20149 TJI-230 230 1	L_50007_Line OCOTILLO 500.0 to SUNCREST 500.0 Ckt 1 With OtayMesa Outage	B	G-1/L-1	108%	120%	102%	
SD-A-SP-T-15	22610 OTAYME&1 230 20149 TJI-230 230 1	L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	B	L-1	122%	123%	107%	

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SD-A-SP-T-16	22610 OTAYME&1 230 20149 TJI-230 230 1	L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1 With OtayMesa Outage	B	G-1/L-1	129%	139%	122%	
SD-A-SP-T-17	22692 ROSCYNTP 69.0 22696 ROSE CYN 69.0 1	L_21063_Line PACFCBCH 69.0 to OLD TOWN 69.0 Ckt 1	B	L-1		101%	106%	Rose Canyon Tap Removal or reconductor upgrade
SD-A-SP-T-18	22740 SANYSYRO 69.0 22616 OTAYLKTP 69.0 1	L_22007_Line BORDER 69.0 to SALT CREEK 69.0 Ckt 1	B	L-1		104%	106%	TL649D [San Ysidro – Otay Lake Tap] Upgrade
SD-A-SP-T-19	22740 SANYSYRO 69.0 22616 OTAYLKTP 69.0 1	L_22041_Line OTAY 69.0 to OTAYLKTP 69.0 Ckt 1	B	L-1		109%	107%	
SD-A-SP-T-20	22512 MONSRATE 69.0 22016 AVCADOTP 69.0 1	L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1	B	L-1			105%	Relay resetting to achieve a 102 MVA rating - in work per Protection
SD-A-SP-T-21	22588 OCNSDETP 69.0 22708 SANLUSRY 69.0 1	L_24032_Line SANLUSRY 69.0 to OCEANSDE 69.0 Ckt 1	B	L-1		107%	112%	Wood to Steel reconductor TL690A,D
SD-A-SP-T-22	22708 SANLUSRY 69.0 22584 OCEANSDE 69.0 1	L_24024_Line OCNSDETP 69.0 to SANLUSRY 69.0 Ckt 1	B	L-1	121%	132%	138%	
SD-A-SP-T-23	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1	L_26012_Line TALEGA 69.0 to TALEGATP 69.0 Ckt 1	B	L-1	103%	124%	133%	
SD-A-SP-T-24	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1	L_26019_Line BASILONE 69.0 to TALEGATP 69.0 Ckt 1	B	L-1		112%		
SD-A-SP-T-25	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1	T_26029_Tran TALEGA 69.00 to TALEGA 138.00 Ckt 1	B	L-1	103%	124%	133%	
SD-A-SP-T-26	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1	TL0695_TL0695 CRSTNTS-BASILONE- TALEGA ck 1	B	L-1		112%	121%	
SD-A-SP-T-27	22836 TALEGA 69.0 22848 TALEGATP 69.0 1	L_24025_Line OCNSDETP 69.0 to STUARTTP 69.0 Ckt 1	B	L-1			197%	Replace Talega BK50 (60MVA)
SD-A-SP-T-28	22836 TALEGA 69.0 22848 TALEGATP 69.0 1	L_24043_Line STUARTTP 69.0 to LASPULGS 69.0 Ckt 1	B	L-1			174%	

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					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-29	22836 TALEGA 69.0 22848 TALEGATP 69.0 1	TL0690_TL0690 SA-OS-STU-LP ck 1	B	L-1			174%	
SD-A-SP-T-30	22360 IMPRLVLY 500 22930 ECO 500 1	L_20009_Line IMPRLVLY 230.0 to ROA-230 230.0 Ckt 1 & L_50007_Line OCOTILLO 500.0 to SUNCREST 500.0 Ckt 1	C3	L-1-1			103%	Post-SONGS Transmission Strengthen Plan including following alternatives under investigation
SD-A-SP-T-31	22360 IMPRLVLY 500 22930 ECO 500 1	L_20021_Line OTAYMESA 230.0 to TJI-230 230.0 Ckt 1 & L_50007_Line OCOTILLO 500.0 to SUNCREST 500.0 Ckt 1	C3	L-1-1			103%	
SD-A-SP-T-32	22930 ECO 500 22933 ECO &1 500 1	L_20009_Line IMPRLVLY 230.0 to ROA-230 230.0 Ckt 1 & L_50007_Line OCOTILLO 500.0 to SUNCREST 500.0 Ckt 1	C3	L-1-1			103%	
SD-A-SP-T-33	22930 ECO 500 22933 ECO &1 500 1	L_20021_Line OTAYMESA 230.0 to TJI-230 230.0 Ckt 1 & L_50007_Line OCOTILLO 500.0 to SUNCREST 500.0 Ckt 1	C3	L-1-1			104%	
SD-A-SP-T-34	22356 IMPRLVLY 230 21025 ELCENTRO 230 1	L_20000_Line DIXIE230 230.0 to IMPRLVLY 230.0 Ckt 1 & L_50006_Line N.GILA 500.0 to IMPRLVLY 500.0 Ckt 1	C3	L-1-1			110%	
SD-A-SP-T-35	22356 IMPRLVLY 230 20118 ROA-230 230 1	L_50007_Line OCOTILLO 500.0 to SUNCREST 500.0 Ckt 1 & L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	C3	L-1-1	129%	137%	134%	Alt B: Build submarine cable system between SCE and SDGE

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					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-36	22610 OTAYME&1 230 20149 TJI-230 230 1	L_20046_Line BAY BLVD 230.0 to MIGUEL 230.0 Ckt 1 & L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	C3	L-1-1	111%	118%	103%	Alt C: Build DC system to strengthen the SDGE main system Alt D: Improve SDGE 230 kV system to accommodate main system strengthening Alt E: To coordinate with IID/CFE and possibly consider policy driven network upgrades associated along with main system strengthening Alt F: DG, demand response, generation redispatch, and import curtailment will be evaluated as part of mitigations along with other network mitigations for the main system and the local 69 kV areas NOTE: Above alternatives are not mutually exclusive; it is highly likely to require a combination of alternatives to address all systems issues
SD-A-SP-T-37	22610 OTAYME&1 230 20149 TJI-230 230 1	L_50003_Line HDWSH 500.0 to N.GILA 500.0 Ckt 1 & L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	C3	L-1-1		118%	103%	
SD-A-SP-T-38	22610 OTAYME&1 230 20149 TJI-230 230 1	L_40033_Line ELLIS 230.0 to JOHANNA 230.0 Ckt 1 & L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	C3	L-1-1	116%	123%	109%	
SD-A-SP-T-39	22610 OTAYME&1 230 20149 TJI-230 230 1	L_40084_Line S.ONOFRE 230.0 to SERRANO 230.0 Ckt 1 & L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	C3	L-1-1	116%	124%	110%	
SD-A-SP-T-40	22610 OTAYME&1 230 20149 TJI-230 230 1	L_20035_Line SYCAMORE 230.0 to PENSQTOS 230.0 Ckt 1 & L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	C3	L-1-1		124%	109%	

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					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-41	22610 OTAYME&1 230 20149 TJI-230 230 1	L_40106_Line VIEJOSC 230.0 to CHINO 230.0 Ckt 1 & L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	C3	L-1-1	119%	126%	112%	
SD-A-SP-T-42	22610 OTAYME&1 230 20149 TJI-230 230 1	L_45002_Line PALOVRDE 500.0 to COLRIVER 500.0 Ckt 1 & L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	C3	L-1-1	123%	129%	114%	
SD-A-SP-T-43	22610 OTAYME&1 230 20149 TJI-230 230 1	L_45002_Line PALOVRDE 500.0 to COLRIVER 500.0 Ckt 1 & L_50007_Line OCOTILLO 500.0 to SUNCREST 500.0 Ckt 1	C3	L-1-1	103%	114%		
SD-A-SP-T-44	22610 OTAYME&1 230 20149 TJI-230 230 1	L_50007_Line OCOTILLO 500.0 to SUNCREST 500.0 Ckt 1 & L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	C3	L-1-1	178%	193%	181%	
SD-A-SP-T-45	22886 SUNCREST 230 228860 SUNCREST TP1 230 1	L_20009_Line IMPRLVLY 230.0 to ROA-230 230.0 Ckt 1 & L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	C3	L-1-1		111%	116%	
SD-A-SP-T-46	22886 SUNCREST 230 228860 SUNCREST TP1 230 1	L_20021_Line OTAYMESA 230.0 to TJI-230 230.0 Ckt 1 & L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	C3	L-1-1		110%	116%	
SD-A-SP-T-47	22886 SUNCREST 230 228861 SUNCREST TP2 230 2	L_20009_Line IMPRLVLY 230.0 to ROA-230 230.0 Ckt 1 & L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	C3	L-1-1		111%	116%	
SD-A-SP-T-48	22886 SUNCREST 230 228861 SUNCREST TP2 230 2	L_20021_Line OTAYMESA 230.0 to TJI-230 230.0 Ckt 1 & L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	C3	L-1-1		110%	116%	

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SD-A-SP-T-49	22828 SYCAMORE 69.0 22756 SCRIPPS 69.0 1	L_20046_Line BAY BLVD 230.0 to MIGUEL 230.0 Ckt 1 & L_20035_Line SYCAMORE 230.0 to PENSQTOS 230.0 Ckt 1	C3	L-1-1		107%	111%	
SD-A-SP-T-50	22597 OLDTWNT 230 22504 MISSION 230 1	L_20046_Line BAY BLVD 230.0 to MIGUEL 230.0 Ckt 1 & L_20019_Line OLD TOWN 230.0 to MISSION 230.0 Ckt 1	C3	L-1-1	127%			will be mitigated when Sycamore-Penasquitos 230 kV line is in service
SD-A-SP-T-51	22400 LASPULGS 69.0 22368 JAP MESA 69.0 1	L_20160_Line TALEGA 230.0 to S.ONOFRE 230.0 Ckt 1 & L_20159_Line TALEGA 230.0 to S.ONOFRE 230.0 Ckt 2	C3	L-1-1	107%			Wood to Steel reconductor TL692 or SPS trip loads.
SD-A-SP-T-52	22400 LASPULGS 69.0 22368 JAP MESA 69.0 1	L_20070_Line S.ONOFRE 230.0 to SONGSMESA 230.0 Ckt 2 & L_20069_Line S.ONOFRE 230.0 to SONGSMESA 230.0 Ckt 1	C3	L-1-1		124%	144%	
SD-A-SP-T-53	22400 LASPULGS 69.0 22368 JAP MESA 69.0 1	L_20068_Line SONGSMESA 230.0 to CAPSTRNO 230.0 Ckt 1 & L_20066_Line SONGSMESA 230.0 to TALEGA 230.0 Ckt 1	C3	L-1-1		124%	144%	
SD-A-SP-T-54	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1	L_20070_Line S.ONOFRE 230.0 to SONGSMESA 230.0 Ckt 2 & L_20069_Line S.ONOFRE 230.0 to SONGSMESA 230.0 Ckt 1	C3	L-1-1		172%	196%	
SD-A-SP-T-55	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1	L_20068_Line SONGSMESA 230.0 to CAPSTRNO 230.0 Ckt 1 & L_20066_Line SONGSMESA 230.0 to TALEGA 230.0 Ckt 1	C3	L-1-1		172%	196%	

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					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-56	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1	L_20160_Line TALEGA 230.0 to S.ONOFRE 230.0 Ckt 1 & L_20159_Line TALEGA 230.0 to S.ONOFRE 230.0 Ckt 2	C3	L-1-1	156%			
SD-A-SP-T-57	22836 TALEGA 69.0 22848 TALEGATP 69.0 1	L_20068_Line SONGSMESA 230.0 to CAPSTRNO 230.0 Ckt 1 & L_20066_Line SONGSMESA 230.0 to TALEGA 230.0 Ckt 1	C3	L-1-1			108%	
SD-A-SP-T-58	22836 TALEGA 69.0 22848 TALEGATP 69.0 1	L_20070_Line S.ONOFRE 230.0 to SONGSMESA 230.0 Ckt 2 & L_20069_Line S.ONOFRE 230.0 to SONGSMESA 230.0 Ckt 1	C3	L-1-1			108%	
SD-A-SP-T-59	22841 TA TAP 138 22396 LAGNA NL 138 1	L_26004_Line CAPSTRNO 138.0 to TRABUCO 138.0 Ckt 1 & L_26002_Line CAPSTRNO 138.0 to PICO 138.0 Ckt 1	C3	L-1-1	109%			Mitigated by the approved southern Orange county upgrade
SD-A-SP-T-60	22841 TA TAP 138 22396 LAGNA NL 138 1	L_26035_Line PICO 138.0 to TRABUCO 138.0 Ckt 1 & L_26002_Line CAPSTRNO 138.0 to PICO 138.0 Ckt 1	C3	L-1-1	117%			Mitigated by the approved southern Orange county upgrade
SD-A-SP-T-61	22841 TA TAP 138 22396 LAGNA NL 138 1	L_26010_Line R.MSNVJO 138.0 to MARGARTA 138.0 Ckt 1 & L_26002_Line CAPSTRNO 138.0 to PICO 138.0 Ckt 1	C3	L-1-1	115%			Mitigated by the approved southern Orange county upgrade
SD-A-SP-T-62	22841 TA TAP 138 22396 LAGNA NL 138 1	L_26002_Line CAPSTRNO 138.0 to PICO 138.0 Ckt 1 & L_26015_Line TALEGA 138.0 to R.MSNVJO 138.0 Ckt 1	C3	L-1-1	119%			Mitigated by the approved southern Orange county upgrade

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SD-A-SP-T-63	22112 CAPSTRNO 138 22656 PICO 138 1	L_26010_Line R.MSNVJO 138.0 to MARGARTA 138.0 Ckt 1 & L_26035_Line PICO 138.0 to TRABUCO 138.0 Ckt 1	C3	L-1-1	112%			Mitigated by the approved southern Orange county upgrade
SD-A-SP-T-64	22112 CAPSTRNO 138 22860 TRABUCO 138 1	L_26010_Line R.MSNVJO 138.0 to MARGARTA 138.0 Ckt 1 & L_26035_Line PICO 138.0 to TRABUCO 138.0 Ckt 1	C3	L-1-1	133%			Mitigated by the approved southern Orange county upgrade
SD-A-SP-T-65	22841 TA TAP 138 22396 LAGNA NL 138 1	L_26013_Line TALEGA 138.0 to PICO 138.0 Ckt 1 & L_26014_Line TALEGA 138.0 to PICO 138.0 Ckt 2	C3	L-1-1	132%			Mitigated by the approved southern Orange county upgrade
SD-A-SP-T-66	22840 TALEGA 138 22656 PICO 138 2	L_26013_Line TALEGA 138.0 to PICO 138.0 Ckt 1 & L_26015_Line TALEGA 138.0 to R.MSNVJO 138.0 Ckt 1	C3	L-1-1	113%			Mitigated by the approved southern Orange county upgrade
SD-A-SP-T-67	22840 TALEGA 138 22656 PICO 138 1	L_26014_Line TALEGA 138.0 to PICO 138.0 Ckt 2 & L_26015_Line TALEGA 138.0 to R.MSNVJO 138.0 Ckt 1	C3	L-1-1	111%			Mitigated by the approved southern Orange county upgrade
SD-A-SP-T-68	22112 CAPSTRNO 138 22656 PICO 138 1	L_26015_Line TALEGA 138.0 to R.MSNVJO 138.0 Ckt 1 & L_26035_Line PICO 138.0 to TRABUCO 138.0 Ckt 1	C3	L-1-1	118%			Mitigated by the approved southern Orange county upgrade
SD-A-SP-T-69	22112 CAPSTRNO 138 22860 TRABUCO 138 1	L_26015_Line TALEGA 138.0 to R.MSNVJO 138.0 Ckt 1 & L_26035_Line PICO 138.0 to TRABUCO 138.0 Ckt 1	C3	L-1-1	144%			Mitigated by the approved southern Orange county upgrade

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SD-A-SP-T-70	22844 TALEGA 230 22840 TALEGA 138 1	T_26030_Tran TALEGA 230.00 to TALEGA 138.00 Ckt 2 & T_26031_Tran TALEGA 230.00 to TALEGA 138.00 Ckt 4	C3	L-1-1	119%			Mitigated by the approved southern Orange county upgrade
SD-A-SP-T-71	22844 TALEGA 230 22840 TALEGA 138 3	T_26030_Tran TALEGA 230.00 to TALEGA 138.00 Ckt 2 & T_26031_Tran TALEGA 230.00 to TALEGA 138.00 Ckt 4	C3	L-1-1	117%			Mitigated by the approved southern Orange county upgrade
SD-A-SP-T-72	22112 CAPSTRNO 138 22860 TRABUCO 138 1	L_26010_Line R.MSNVJO 138.0 to MARGARTA 138.0 Ckt 1 & L_26005_Line CAPSTRNO 138.0 to TRABUCO 138.0 Ckt 2	C3	L-1-1		134%	142%	Shed loads, or build a new 230 kV substation looped into one of Path 43 lines owned by SCE
SD-A-SP-T-73	22112 CAPSTRNO 138 22860 TRABUCO 138 1	L_26005_Line CAPSTRNO 138.0 to TRABUCO 138.0 Ckt 2 & L_26015_Line TALEGA 138.0 to R.MSNVJO 138.0 Ckt 1	C3	L-1-1		157%	167%	SPS to trip loads, or build a new 230 kV substation looped into one of Path 43 lines owned by SCE
SD-A-SP-T-74	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1	L_26006_Line CRSTNTS 69.0 to TALEGATP 69.0 Ckt 1 & L_26012_Line TALEGA 69.0 to TALEGATP 69.0 Ckt 1	C3	L-1-1		113%	121%	Wood to Steel reconductor TL690A,D
SD-A-SP-T-75	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1	L_26012_Line TALEGA 69.0 to TALEGATP 69.0 Ckt 1 & L_24024_Line OCNSDETP 69.0 to SANLUSRY 69.0 Ckt 1	C3	L-1-1		130%	140%	Wood to Steel reconductor TL690A,D
SD-A-SP-T-76	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1	T_26029_Tran TALEGA 69.00 to TALEGA 138.00 Ckt 1 & L_24024_Line OCNSDETP 69.0 to SANLUSRY 69.0 Ckt 1	C3	L-1-1		130%	140%	Wood to Steel reconductor TL690A,D

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SD-A-SP-T-77	22836 TALEGA 69.0 22840 TALEGA 138 1	L_24024_Line OCNSDETP 69.0 to SANLUSRY 69.0 Ckt 1 & L_24032_Line SANLUSRY 69.0 to OCEANSDE 69.0 Ckt 1	C3	L-1-1	129%	133%	145%	Replace Talega BK50
SD-A-SP-T-78	22708 SANLUSRY 69.0 22584 OCEANSDE 69.0 1	L_26012_Line TALEGA 69.0 to TALEGATP 69.0 Ckt 1 & L_24024_Line OCNSDETP 69.0 to SANLUSRY 69.0 Ckt 1	C3	L-1-1	144%	168%	180%	Wood to Steel reconductor TL690A,D
SD-A-SP-T-79	22588 OCNSDETP 69.0 22708 SANLUSRY 69.0 1	L_26012_Line TALEGA 69.0 to TALEGATP 69.0 Ckt 1 & L_24032_Line SANLUSRY 69.0 to OCEANSDE 69.0 Ckt 1	C3	L-1-1	114%	131%	140%	Wood to Steel reconductor TL690A,D
SD-A-SP-T-80	22604 OTAY 69.0 22616 OTAYLKTP 69.0 1	L_22007_Line BORDER 69.0 to SALT CREEK 69.0 Ckt 1 & L_22057_Line SANYSYRO 69.0 to OTAYLKTP 69.0 Ckt 1	C3	L-1-1	202%	180%	176%	DG, shedding loads, generation dispatch, TL649D [San Ysidro – Otay Lake Tap] Upgrade , Higher emergency rating and further investigation on local Network supply as needed
SD-A-SP-T-81	22604 OTAY 69.0 22616 OTAYLKTP 69.0 1	L_22056_Line SANYSYRO 69.0 to OTAY TP 69.0 Ckt 1 & L_22007_Line BORDER 69.0 to SALT CREEK 69.0 Ckt 1	C3	L-1-1	142%	110%	105%	DG, shedding loads, generation dispatch, TL649D [San Ysidro – Otay Lake Tap] Upgrade , Higher emergency rating and further investigation on local Network supply as needed

Thermal Overloads

ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-82	22740 SANYS DRO 69.0 22608 OTAY TP 69.0 1	L_22007_Line BORDER 69.0 to SALT CREEK 69.0 Ckt 1 & L_22041_Line OTAY 69.0 to OTAYLKTP 69.0 Ckt 1	C3	L-1-1	171%	134%	128%	DG, shedding loads, generation dispatch, TL649D [San Ysidro – Otay Lake Tap] Upgrade , Higher emergency rating and further investigation on local Network supply as needed
SD-A-SP-T-83	22740 SANYS DRO 69.0 22616 OTAYLKTP 69.0 1	L_22007_Line BORDER 69.0 to SALT CREEK 69.0 Ckt 1 & L_22041_Line OTAY 69.0 to OTAYLKTP 69.0 Ckt 1	C3	L-1-1	245%	220%	215%	DG, shedding loads, generation dispatch, TL649D [San Ysidro – Otay Lake Tap] Upgrade , Higher emergency rating and further investigation on local Network supply as needed
SD-A-SP-T-84	22740 SANYS DRO 69.0 22616 OTAYLKTP 69.0 1	L_22040_Line OTAY 69.0 to OTAY TP 69.0 Ckt 1 & L_22058_Line BAY BLVD 69.0 to IMPRLBCH 69.0 Ckt 1	C3	L-1-1	162%	173%	184%	DG, shedding loads, generation dispatch, TL649D [San Ysidro – Otay Lake Tap] Upgrade , Higher emergency rating and further investigation on local Network supply as needed
SD-A-SP-T-85	22008 ASH 69.0 22012 ASH TP 69.0 1	L_25022_Line ESCNDIDO 69.0 to FELICITA 69.0 Ckt 1 & L_25032_Line FELCTATP 69.0 to FELICITA 69.0 Ckt 1	C3	L-1-1	109%	118%	127%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-86	22020 AVOCADO 69.0 22508 MNSRATTP 69.0 1	L_25036_Line MONSRATE 69.0 to AVCADOTP 69.0 Ckt 1 & L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1	C3	L-1-1	163%	163%	177%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed

Thermal Overloads

ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-87	22056 BERNARDO 69.0 22284 FELCTATP 69.0 1	L_25049_Line POWAY 69.0 to R.CARMEL 69.0 Ckt 1 & L_21079_Line SYCAMORE 69.0 to BERNARDO 69.0 Ckt 1	C3	L-1-1		113%	122%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-88	22056 BERNARDO 69.0 22676 R.CARMEL 69.0 1	L_25020_Line ESCNDIDO 69.0 to ESCO 69.0 Ckt 1 & L_25048_Line POWAY 69.0 to POMERADO 69.0 Ckt 1	C3	L-1-1			111%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-89	22256 ESCNDIDO 69.0 22272 ESCO 69.0 1	L_25006_Line BERNARDO 69.0 to R.CARMEL 69.0 Ckt 1 & L_25048_Line POWAY 69.0 to POMERADO 69.0 Ckt 1	C3	L-1-1	130%	151%	165%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-90	22256 ESCNDIDO 69.0 22288 FELICITA 69.0 1	L_25000_Line ASH 69.0 to ASH TP 69.0 Ckt 1 & L_25021_Line ESCNDIDO 69.0 to FELCTATP 69.0 Ckt 1	C3	L-1-1		103%	113%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-91	22272 ESCO 69.0 22876 WARCYNTP 69.0 1	L_25006_Line BERNARDO 69.0 to R.CARMEL 69.0 Ckt 1 & L_25048_Line POWAY 69.0 to POMERADO 69.0 Ckt 1	C3	L-1-1	145%	165%	178%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-92	22512 MONSRATE 69.0 22016 AVCADOTP 69.0 1	L_25003_Line AVOCADO 69.0 to MNSRATTP 69.0 Ckt 1 & L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1	C3	L-1-1	139%	141%	152%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-93	22640 PENDLETN 69.0 22708 SANLUSRY 69.0 1	L_25043_Line PALA 69.0 to MNSRATTP 69.0 Ckt 1 & L_24021_Line MORHILTP 69.0 to MELROSE 69.0 Ckt 1	C3	L-1-1	126%	134%	144%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed

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Study Area: **San Diego Area - Summer Peak**

Thermal Overloads



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-94	22668 POWAY 69.0 22676 R.CARMEL 69.0 1	L_25005_Line BERNARDO 69.0 to FELCTATP 69.0 Ckt 1 & L_21079_Line SYCAMORE 69.0 to BERNARDO 69.0 Ckt 1	C3	L-1-1	106%	115%	123%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-95	22668 POWAY 69.0 22876 WARCYNTP 69.0 1	L_25006_Line BERNARDO 69.0 to R.CARMEL 69.0 Ckt 1 & L_25048_Line POWAY 69.0 to POMERADO 69.0 Ckt 1	C3	L-1-1	117%	134%	145%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-96	22708 SANLUSRY 69.0 22582 OCEAN RANCH 69.0 2	L_25024_Line ESCNDIDO 69.0 to SANMRCOS 69.0 Ckt 1 & L_24033_Line SANLUSRY 69.0 to OCEAN RANCH 69.0 Ckt 1	C3	L-1-1		110%	119%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-97	22736 SANTYSBL 69.0 22152 CREELMAN 69.0 1	L_25051_Line RINCON 69.0 to LILAC 69.0 Ckt 1 & L_25056_Line VALCNTR 69.0 to ASH TP 69.0 Ckt 1	C3	L-1-1		105%	113%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-98	22884 WARNERS 69.0 22688 RINCON 69.0 1	L_25051_Line RINCON 69.0 to LILAC 69.0 Ckt 1 & L_25056_Line VALCNTR 69.0 to ASH TP 69.0 Ckt 1	C3	L-1-1	144%	163%	174%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-99	22884 WARNERS 69.0 22736 SANTYSBL 69.0 1	L_25051_Line RINCON 69.0 to LILAC 69.0 Ckt 1 & L_25056_Line VALCNTR 69.0 to ASH TP 69.0 Ckt 1	C3	L-1-1	165%	182%	198%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-100	22124 CHCARITA 138 22760 SHADOWR 138 1	T_24046_Trans ENCINA 230.00 to ENCINA 138.00 Ckt 1 & L_21001_Line BATIQTP 138.0 to PENSQTOS 138.0 Ckt 1	C3	L-1-1		110%	115%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed

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Study Area: **San Diego Area - Summer Peak**

Thermal Overloads



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-101	22192 DOUBLTTP 138 22300 FRIARS 138 1	T_24046_Tran ENCINA 230.00 to ENCINA 138.00 Ckt 1 & T_21109_Tran PENSQTOS 230.00 to PENSQTOS 138.00 Ckt 1	C3	L-1-1		115%	121%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-102	22831 SYCAMORE 138 22124 CHCARITA 138 1	T_24046_Tran ENCINA 230.00 to ENCINA 138.00 Ckt 1 & L_21001_Line BATIQTP 138.0 to PENSQTOS 138.0 Ckt 1	C3	L-1-1		144%	113%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-103	22400 LASPULGS 69.0 22368 JAP MESA 69.0 1	L_24024_Line OCNSDETP 69.0 to SANLUSRY 69.0 Ckt 1 & L_24032_Line SANLUSRY 69.0 to OCEANSDE 69.0 Ckt 1	C3	L-1-1	181%	165%	179%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-104	22440 MELROSE 69.0 22442 MELRSETP 69.0 1	L_24033_Line SANLUSRY 69.0 to OCEAN RANCH 69.0 Ckt 1 & L_24034_Line SANLUSRY 69.0 to OCEAN RANCH 69.0 Ckt 2	C3	L-1-1		107%	115%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-105	22512 MONSRATE 69.0 22016 AVCADOTP 69.0 1	L_24058_Line MORHILTP 69.0 to MELROSE 69.0 Ckt 1 & L_25043_Line PALA 69.0 to MNSRATTP 69.0 Ckt 1	C3	L-1-1	109%	119%	128%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-106	22512 MONSRATE 69.0 22524 MORHILTP 69.0 1	L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1 & L_25043_Line PALA 69.0 to MNSRATTP 69.0 Ckt 1	C3	L-1-1	132%	138%	148%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-107	22524 MORHILTP 69.0 22440 MELROSE 69.0 1	L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1 & L_25043_Line PALA 69.0 to MNSRATTP 69.0 Ckt 1	C3	L-1-1	142%	149%	160%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed

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Study Area: **San Diego Area - Summer Peak**

Thermal Overloads



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-108	22624 PALA 69.0 22508 MNSRATTP 69.0 1	L_24021_Line MORHILTP 69.0 to MELROSE 69.0 Ckt 1 & L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1	C3	L-1-1	107%	109%	115%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-109	22640 PENDLETN 69.0 22708 SANLUSRY 69.0 1	L_24020_Line MONSRATE 69.0 to MORHILTP 69.0 Ckt 1 & L_25043_Line PALA 69.0 to MNSRATTP 69.0 Ckt 1	C3	L-1-1	114%	121%	131%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-110	22712 SANLUSRY 138 22708 SANLUSRY 69.0 1	T_24046_Tran ENCINA 230.00 to ENCINA 138.00 Ckt 1 & L_21001_Line BATIQTP 138.0 to PENSQTOS 138.0 Ckt 1	C3	L-1-1	123%			DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-111	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1	L_24032_Line SANLUSRY 69.0 to OCEANSDE 69.0 Ckt 1 & L_24024_Line OCNSDETP 69.0 to SANLUSRY 69.0 Ckt 1	C3	L-1-1	132%	121%	131%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-112	22064 BLDCKRTP 69.0 22168 DESCANSO 69.0 1	L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1 & L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1	C3	L-1-1	239%	227%	237%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-113	22064 BLDCKRTP 69.0 22736 SANTYSBL 69.0 1	L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1 & L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1	C3	L-1-1	240%	227%	237%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-114	22306 GARFIELD 69.0 22208 EL CAJON 69.0 1	L_23032_Line MISSION 69.0 to MURRAY 69.0 Ckt 2 & L_21053_Line MISSION 69.0 to MURRAY 69.0 Ckt 1	C3	L-1-1	120%	127%	135%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed

Thermal Overloads

ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-115	22408 LOSCOCHS 69.0 22216 ELLIOTT 69.0 1	L_23038_Line SYCAMORE 138.0 to SANTEE 138.0 Ckt 1 & L_22027_Line ML60 TAP 138.0 to JAMUL 138.0 Ckt 1	C3	L-1-1		107%	117%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-116	22416 LOVELAND 69.0 22168 DESCANSO 69.0 1	L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1 & L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1	C3	L-1-1	113%	122%	117%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-117	22416 LOVELAND 69.0 22168 DESCANSO 69.0 1	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 & L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C3	L-1-1	122%	115%	109%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-118	22456 MIGUEL 69.0 22340 GRANITTP 69.0 1	L_23012_Line EL CAJON 69.0 to GRANITE 69.0 Ckt 1 & L_23022_Line LOSCOCHS 69.0 to GRANITTP 69.0 Ckt 1	C3	L-1-1	106%	104%	112%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-119	22532 MURRAY 69.0 22306 GARFIELD 69.0 1	L_23032_Line MISSION 69.0 to MURRAY 69.0 Ckt 2 & L_21053_Line MISSION 69.0 to MURRAY 69.0 Ckt 1	C3	L-1-1		111%	118%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-120	22736 SANTYSBL 69.0 22152 CREELMAN 69.0 1	L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1 & L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1	C3	L-1-1	185%	180%	192%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-121	22884 WARNERS 69.0 22688 RINCON 69.0 1	L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1 & L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1	C3	L-1-1	150%	144%	153%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed

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Study Area: **San Diego Area - Summer Peak**

Thermal Overloads



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-122	22884 WARNERS 69.0 22736 SANTYSBL 69.0 1	L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1 & L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1	C3	L-1-1	133%	130%	131%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-123	22152 CREELMAN 69.0 22828 SYCAMORE 69.0 1	L_22027_Line ML60 TAP 138.0 to JAMUL 138.0 Ckt 1 & L_21084_Line SYCAMORE 138.0 to SANTEE 138.0 Ckt 1	C3	L-1-1			116%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-124	22408 LOSCOCHS 69.0 22216 ELLIOTT 69.0 1	L_22027_Line ML60 TAP 138.0 to JAMUL 138.0 Ckt 1 & L_21084_Line SYCAMORE 138.0 to SANTEE 138.0 Ckt 1	C3	L-1-1		107%	117%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-125	22420 SILVERGT 69.0 22548 NATNLCTY 69.0 1	L_22036_Line NAVSTMTR 69.0 to SWEETWTR 69.0 Ckt 1 & T_22077_Tran SILVERGT 230.00 to SILVERGT 69.00 Ckt 2	C3	L-1-1		112%	121%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-126	22420 SILVERGT 69.0 22868 URBAN 69.0 1	L_22001_Line B 69.0 to SILVERGT 69.0 Ckt 1 & L_22002_Line B 69.0 to SILVERGT 69.0 Ckt 2	C3	L-1-1	108%	130%	136%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-127	22516 MONTGMRY 69.0 22520 MONTGYTP 69.0 1	L_22063_Line BAY BLVD 69.0 to SWEETWTR 69.0 Ckt 1 & L_22060_Line BAY BLVD 69.0 to MONTGYTP 69.0 Ckt 1	C3	L-1-1	124%	139%	147%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-128	22548 NATNLCTY 69.0 22820 SWEETWTR 69.0 1	L_22036_Line NAVSTMTR 69.0 to SWEETWTR 69.0 Ckt 1 & T_22077_Tran SILVERGT 230.00 to SILVERGT 69.00 Ckt 2	C3	L-1-1		111%	121%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed

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Study Area: **San Diego Area - Summer Peak**

Thermal Overloads



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-129	22768 BAY BLVD 69.0 22352 IMPRLBCH 69.0 1	L_22040_Line OTAY 69.0 to OTAY TP 69.0 Ckt 1 & L_22057_Line SANYSDRO 69.0 to OTAYLKTP 69.0 Ckt 1	C3	L-1-1	116%	125%	132%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-130	22768 BAY BLVD 69.0 22516 MONTGMRY 69.0 1	L_22063_Line BAY BLVD 69.0 to SWEETWTR 69.0 Ckt 1 & L_22060_Line BAY BLVD 69.0 to MONTGYTP 69.0 Ckt 1	C3	L-1-1	165%	183%	193%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-131	22064 BLDCRKTP 69.0 22168 DESCANSO 69.0 1	L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1 & L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1	C3	L-1-1	150%	153%	168%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-132	22064 BLDCRKTP 69.0 22736 SANTYSBL 69.0 1	L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1 & L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1	C3	L-1-1	150%	153%	168%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-133	22136 CLAIMMNT 69.0 22140 CLARMTTP 69.0 1	L_21031_Line KEARNY 69.0 to MISSION 69.0 Ckt 1 & L_21041_Line MESAHTGS 69.0 to MISSION 69.0 Ckt 1	C3	L-1-1	117%	142%	142%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-134	22160 DEL MAR 69.0 22644 PENSQTOS 69.0 1	L_21009_Line DEL MAR 69.0 to PENSQTOS 69.0 Ckt 2 & L_21057_Line NORTHCTY 69.0 to PENSQTOS 69.0 Ckt 1	C3	L-1-1	109%	129%	137%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-135	22160 DEL MAR 69.0 22644 PENSQTOS 69.0 2	L_21008_Line DEL MAR 69.0 to PENSQTOS 69.0 Ckt 1 & L_21057_Line NORTHCTY 69.0 to PENSQTOS 69.0 Ckt 1	C3	L-1-1	111%	130%	138%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed

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Study Area: **San Diego Area - Summer Peak**

Thermal Overloads



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-136	22188 DOUBLTTP 69.0 22164 DELMARTP 69.0 1	L_21026_Line GENESEE 69.0 to UCM 69.0 Ckt 1 & L_21068_Line PENSQTOS 69.0 to TOREYPNS 69.0 Ckt 1	C3	L-1-1	106%	114%	120%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-137	22188 DOUBLTTP 69.0 22164 DELMARTP 69.0 1	L_21028_Line MIRASNT0 69.0 to PENSQTOS 69.0 Ckt 1 & L_21068_Line PENSQTOS 69.0 to TOREYPNS 69.0 Ckt 1	C3	L-1-1		120%	126%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-138	22192 DOUBLTTP 138 22300 FRIARS 138 1	T_21108_Tran PENSQTOS 230.00 to PENSQTOS 69.00 Ckt 2 & T_21109_Tran PENSQTOS 230.00 to PENSQTOS 138.00 Ckt 1	C3	L-1-1		104%	106%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-139	22200 DUNHILTP 69.0 22188 DOUBLTTP 69.0 1	L_21025_Line GENESEE 69.0 to PENSQTOS 69.0 Ckt 2 & L_21028_Line MIRASNT0 69.0 to PENSQTOS 69.0 Ckt 1	C3	L-1-1		115%	121%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-140	22200 DUNHILTP 69.0 22188 DOUBLTTP 69.0 1	L_21026_Line GENESEE 69.0 to UCM 69.0 Ckt 1 & L_21068_Line PENSQTOS 69.0 to TOREYPNS 69.0 Ckt 1	C3	L-1-1	106%	114%	120%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-141	22200 DUNHILTP 69.0 22188 DOUBLTTP 69.0 1	L_21028_Line MIRASNT0 69.0 to PENSQTOS 69.0 Ckt 1 & L_21068_Line PENSQTOS 69.0 to TOREYPNS 69.0 Ckt 1	C3	L-1-1		120%	126%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-142	22306 GARFIELD 69.0 22208 EL CAJON 69.0 1	L_21053_Line MISSION 69.0 to MURRAY 69.0 Ckt 1 & L_21054_Line MISSION 69.0 to MURRAY 69.0 Ckt 2	C3	L-1-1	120%	127%	135%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed

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Study Area: **San Diego Area - Summer Peak**

Thermal Overloads



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-143	22316 GENESEE 69.0 22644 PENSQTOS 69.0 2	L_21028_Line MIRASNT0 69.0 to PENSQTOS 69.0 Ckt 1 & L_21089_Line TOREYPNS 69.0 to UCM 69.0 Ckt 1	C3	L-1-1	104%	146%	155%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-144	22316 GENESEE 69.0 22864 UCM 69.0 1	L_21012_Line DOUBLTTP 69.0 to DELMARTP 69.0 Ckt 1 & L_21068_Line PENSQTOS 69.0 to TOREYPNS 69.0 Ckt 1	C3	L-1-1	113%	123%	129%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-145	22331 MIRASNT0 69.0 22316 GENESEE 69.0 1	L_21025_Line GENESEE 69.0 to PENSQTOS 69.0 Ckt 2 & L_21089_Line TOREYPNS 69.0 to UCM 69.0 Ckt 1	C3	L-1-1		111%	117%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-146	22331 MIRASNT0 69.0 22644 PENSQTOS 69.0 1	L_21025_Line GENESEE 69.0 to PENSQTOS 69.0 Ckt 2 & L_21089_Line TOREYPNS 69.0 to UCM 69.0 Ckt 1	C3	L-1-1		138%	146%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-147	22372 KEARNY 69.0 22140 CLARMTTP 69.0 1	L_21031_Line KEARNY 69.0 to MISSION 69.0 Ckt 1 & L_21041_Line MESAHTGS 69.0 to MISSION 69.0 Ckt 1	C3	L-1-1	131%	151%	160%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-148	22416 LOVELAND 69.0 22168 DESCANSO 69.0 1	L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1 & L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1	C3	L-1-1	113%	122%	117%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-149	22480 MIRAMAR 69.0 22296 FENTONTP 69.0 1	L_21066_Line PENSQTOS 69.0 to MESA RIM 69.0 Ckt 1 & L_21081_Line SYCAMORE 69.0 to SCRIPPS 69.0 Ckt 1	C3	L-1-1		113%	116%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed

ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-150	22484 MIRAMAR1 69.0 22296 FENTONTP 69.0 1	L_21066_Line PENSQTOS 69.0 to MESA RIM 69.0 Ckt 1 & L_21081_Line SYCAMORE 69.0 to SCRIPPS 69.0 Ckt 1	C3	L-1-1		116%	119%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-151	22500 MISSION 138 22496 MISSION 69.0 2	T_21096_Tran MISSION 138.00 to MISSION 69.00 Ckt 1 & T_21098_Tran MISSION 138.00 to MISSION 69.00 Ckt 3	C3	L-1-1		104%	113%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-152	22532 MURRAY 69.0 22306 GARFIELD 69.0 1	L_21053_Line MISSION 69.0 to MURRAY 69.0 Ckt 1 & L_21054_Line MISSION 69.0 to MURRAY 69.0 Ckt 2	C3	L-1-1		111%	118%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-153	22644 PENSQTOS 69.0 22164 DELMARTP 69.0 1	L_21028_Line MIRASNT0 69.0 to PENSQTOS 69.0 Ckt 1 & L_21068_Line PENSQTOS 69.0 to TOREYPNS 69.0 Ckt 1	C3	L-1-1		120%	126%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-154	22644 PENSQTOS 69.0 22856 TOREYPNS 69.0 1	L_21015_Line DUNHILTP 69.0 to DOUBLTTP 69.0 Ckt 1 & L_21026_Line GENESEE 69.0 to UCM 69.0 Ckt 1	C3	L-1-1	107%	149%	121%	TL662 should have 136MVA emergency rating. In the works to change relay settings.
SD-A-SP-T-155	22644 PENSQTOS 69.0 22856 TOREYPNS 69.0 1	L_21028_Line MIRASNT0 69.0 to PENSQTOS 69.0 Ckt 1 & L_21064_Line PENSQTOS 69.0 to DELMARTP 69.0 Ckt 1	C3	L-1-1		148%	120%	TL662 should have 136MVA emergency rating. In the works to change relay settings.
SD-A-SP-T-156	22644 PENSQTOS 69.0 22856 TOREYPNS 69.0 1	L_21088_Line TOREYPNS 69.0 to DUNHILTP 69.0 Ckt 1 & L_21026_Line GENESEE 69.0 to UCM 69.0 Ckt 1	C3	L-1-1	105%	146%	119%	TL662 should have 136MVA emergency rating. In the works to change relay settings.

Thermal Overloads

ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-157	22644 PENSQTOS 69.0 22856 TOREYPNS 69.0 1	L_21025_Line GENESEE 69.0 to PENSQTOS 69.0 Ckt 2 & L_21064_Line PENSQTOS 69.0 to DELMARTP 69.0 Ckt 1	C3	L-1-1		134%	109%	TL662 should have 136MVA emergency rating. In the works to change relay settings.
SD-A-SP-T-158	22652 PENSQTOS 230 22644 PENSQTOS 69.0 2	T_21107_Tran PENSQTOS 230.00 to PENSQTOS 69.00 Ckt 1 & T_21109_Tran PENSQTOS 230.00 to PENSQTOS 138.00 Ckt 1	C3	L-1-1		105%	113%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-159	22668 POWAY 69.0 22676 R.CARMEL 69.0 1	L_21000_Line ARTESN 69.0 to SYCAMORE 69.0 Ckt 1 & L_21079_Line SYCAMORE 69.0 to BERNARDO 69.0 Ckt 1	C3	L-1-1	108%	114%	121%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-160	22692 ROSCYNTP 69.0 22696 ROSE CYN 69.0 1	L_21063_Line PACFCBCH 69.0 to OLD TOWN 69.0 Ckt 1 & L_21035_Line LA JOLLA 69.0 to ROSE CYN 69.0 Ckt 1	C3	L-1-1	116%	127%	134%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-161	22768 BAY BLVD 69.0 22516 MONTGMRY 69.0 1	T_21102_Tran OLD TOWN 69.00 to OLD TOWN 230.00 Ckt 1 & L_22060_Line BAY BLVD 69.0 to MONTGYTP 69.0 Ckt 1	C3	L-1-1	115%	128%	135%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-162	22832 SYCAMORE 230 22828 SYCAMORE 69.0 3	T_21110_Tran SYCAMORE 230.00 to SYCAMORE 69.00 Ckt 1 & T_21111_Tran SYCAMORE 230.00 to SYCAMORE 69.00 Ckt 2	C3	L-1-1	117%	106%	112%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-163	22856 TOREYPNS 69.0 22200 DUNHILTP 69.0 1	L_21028_Line MIRASNT0 69.0 to PENSQTOS 69.0 Ckt 1 & L_21068_Line PENSQTOS 69.0 to TOREYPNS 69.0 Ckt 1	C3	L-1-1	105%	128%	135%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed

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Study Area: **San Diego Area - Summer Peak**

Thermal Overloads



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-T-164	22856 TOREYPNS 69.0 22864 UCM 69.0 1	L_21028_Line MIRASNT0 69.0 to PENSQTOS 69.0 Ckt 1 & L_21025_Line GENESEE 69.0 to PENSQTOS 69.0 Ckt 2	C3	L-1-1	104%	146%	154%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-165	22884 WARNERS 69.0 22688 RINCON 69.0 1	L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1 & L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1	C3	L-1-1	150%	144%	153%	DG, Shedding load, generation dispatch, higher emergency rating and further investigation on local network supply as needed
SD-A-SP-T-166	22609 OTAYMESA 230 20149 TJI-230 230 1	IV-8032_IV 8032 50004 & BK82 CB	C	Breaker Failure	105%			Post-SONGS Transmission Strengthen Plan TBD
SD-A-SP-T-167	22610 OTAYME&1 230 20149 TJI-230 230 1	IV-8032_IV 8032 50004 & BK82 CB	C	Breaker Failure		111%		Post-SONGS Transmission Strengthen Plan TBD
SD-A-SP-T-168	22844 TALEGA 230 22840 TALEGA 138 1	TA-5W_TALEGA 138 kV 5W CB	C	Breaker Failure	121%			Mitigated by the approved southern Orange county upgrade
SD-A-SP-T-169	22844 TALEGA 230 22840 TALEGA 138 3	TA-5W_TALEGA 138 kV 5W CB	C	Breaker Failure	119%			Mitigated by the approved southern Orange county upgrade
SD-A-SP-T-170	22112 CAPSTRNO 138 22656 PICO 138 1	13835/13831_TA-TA TAP33-PICO 1 + TA-RMV 1 138 kV	C	common structure	104%			Mitigated by the approved southern Orange county upgrade
SD-A-SP-T-171	22836 TALEGA 69.0 22848 TALEGATP 69.0 1	690/6912_STU-OC-SA-LP + SA-PE	C	common structure			174%	Wood to Steel reconductor TL690A,D
SD-A-SP-T-172	22808 STUARTTP 69.0 22400 LASPULGS 69.0 1	TA-5W_TALEGA 138 kV 5W CB	C	Breaker Failure	104%	124%	133%	Wood to Steel reconductor TL690A,D
SD-A-SP-T-173	22740 SANYSYRO 69.0 22616 OTAYLKTP 69.0 1	Bus_OY69E_Otay 69kV E Bus	C	Bus Section		112%	111%	TL649D [San Ysidro – Otay Lake Tap] Upgrade

San Onofre Nuclear Generation Station was retired on June 7, 2013 and therefore was removed from the base cases used for the 2013/14 ISO transmission planning process.

Thermal Overloads

ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2015 Summer Off-Peak	2018 Summer Light Load	N/A	
SD-A-NP-T-1	22610 OTAYME&1 230 20149 TJI-230 230 1	L_50005_Line IMPRLVLY 500.0 to ECO 500.0 Ckt 1	B	L-1	104%			Post-SONGS Comprehensive System Strengthen Plan TBD
SD-A-NP-T-2	22610 OTAYME&1 230 20149 TJI-230 230 1	L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	B	L-1	105%			Post-SONGS Comprehensive System Strengthen Plan TBD
SD-A-NP-T-3	22040 BARRETT 69.0 22104 CAMERON 69.0 1	L_23017_Line GLNCLFTP 69.0 to CRESTWD 69.0 Ckt 1	B	L-1		103%		Existing RAS to trip Kumeyaay wind farm
SD-A-NP-T-4	22040 BARRETT 69.0 22104 CAMERON 69.0 1	TL0629_TL0629 CW-DE-GC ck 1	B	L-1		103%		Existing RAS to trip Kumeyaay wind farm
SD-A-NP-T-5	22064 BLDCKRTP 69.0 22168 DESCANSO 69.0 1	Bus_LL69_Loveland 69kV Bus	C	Bus Section		118%		Existing RAS to trip Kumeyaay wind farm
SD-A-NP-T-6	22064 BLDCKRTP 69.0 22736 SANTYSBL 69.0 1	Bus_LL69_Loveland 69kV Bus	C	Bus Section		118%		Existing RAS to trip Kumeyaay wind farm

Voltage Deviations

ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-VD-1	OCOTILLO 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	L-1	-6.09%			Ocotillo is a generator bus. Mitigation will be in accord with the interconnection agreement provisions.
SD-A-SP-VD-2	OCOTILLO 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	G-1/L-1	-6.35%		-5.86%	Ocotillo is a generator bus. Mitigation will be in accord with the interconnection agreement provisions.
SD-A-SP-VD-3	SUNCREST 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	L-1	-6.06%			Post-SONGS Transmission Strengthen Plan TBD
SD-A-SP-VD-4	SUNCREST 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	G-1/L-1	-6.02%	-5.21%	-6.55%	Post-SONGS Transmission Strengthen Plan TBD
SD-A-SP-VD-5	BASILONE 69 KV	L_26018_Line BASILONE 69.0 to JAP MESA 69.0 Ckt 1	B	L-1		-7.45%		Post-cont. volt. within SDG&E's acceptable operational voltage limits.
SD-A-SP-VD-6	BASILONE 69 KV	L_26018_Line BASILONE 69.0 to JAP MESA 69.0 Ckt 1	B	G-1/L-1		-7.34%		Post-cont. volt. within SDG&E's acceptable operational voltage limits.
SD-A-SP-VD-7	ENCNITAS 69 KV	L_24015_Line ENCNITAS 69.0 to DEL MAR 69.0 Ckt 1	B	L-1	5.60%	5.17%	7.42%	Post-cont. volt. within SDG&E's acceptable operational voltage limits.
SD-A-SP-VD-8	ENCNITAS 69 KV	L_24015_Line ENCNITAS 69.0 to DEL MAR 69.0 Ckt 1	B	G-1/L-1	5.79%	5.60%	7.34%	Post-cont. volt. within SDG&E's acceptable operational voltage limits.
SD-A-SP-VD-9	PENDLETN 69 KV	L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1	B	L-1	6.57%	5.04%	5.46%	Pendleton becomes radial; Post-cont. volt. within SDG&E's acceptable operational voltage limits.
SD-A-SP-VD-10	PENDLETN 69 KV	L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1	B	G-1/L-1	6.65%	5.11%	5.42%	Pendleton becomes radial; Post-cont. volt. within SDG&E's acceptable operational voltage limits.
SD-A-SP-VD-11	CREELMAN 69 KV	L_25015_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1 L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1	C	L-1-1	25.29%	27.58%	29.07%	Customers are supplied by local Netwrok. Further evaluation

Voltage Deviations

ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-VD-12	SANTYSBL 69 KV	L_25015_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1 L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1	C	L-1-1	12.40%	15.08%	15.85%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-13	WARNERS 69 KV	L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1 L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1	C	L-1-1		11.16%	12.39%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-14	BLDCRKTP 69 KV	L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1 L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1	C	L-1-1		11.14%	12.38%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-15	BOLDRCRK 69 KV	L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1 L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1	C	L-1-1		11.14%	12.38%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-16	SANTYSBL 69 KV	L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1 L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1	C	L-1-1	12.48%	14.48%	16.29%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-17	ALPINE 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	30.09%	33.45%	36.90%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-18	BARRETT 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	29.60%	32.96%	36.18%	Customers are supplied by local Network. Further evaluation

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Study Area: **San Diego Area - Summer Peak**

Voltage Deviations



ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-VD-19	BARRETT 69 KV	L_23026_Line LOVELAND 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1		11.78%	13.98%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-20	CAMERON 69 KV	L_23026_Line LOVELAND 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1		11.37%	13.18%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-21	CRESTWD 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	28.09%	31.43%	34.00%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-22	CRESTWD 69 KV	L_23026_Line LOVELAND 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1		11.16%	12.76%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-23	BLDCRKTP 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	17.11%	19.21%	20.99%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-24	DESCANSO 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	27.82%	30.62%	33.46%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-25	DESCANSO 69 KV	L_23026_Line LOVELAND 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1		11.23%	13.13%	Customers are supplied by local Network. Further evaluation

Voltage Deviations

ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-VD-26	GLENCLIF 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	27.98%	31.00%	33.72%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-27	GLENCLIF 69 KV	L_23026_Line LOVELAND 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1		11.22%	12.99%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-28	GLNCLFTP 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	27.98%	31.00%	33.72%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-29	GLNCLFTP 69 KV	L_23026_Line LOVELAND 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1		11.22%	12.99%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-30	KUMEYAAY 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	28.08%	31.43%	34.00%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-31	KUMEYAAY 69 KV	L_23026_Line LOVELAND 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1		11.16%	12.76%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-32	LOVELAND 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	30.04%	33.47%	36.93%	Customers are supplied by local Network. Further evaluation

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Voltage Deviations

ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-A-SP-VD-33	LOVELAND 69 KV	L_23026_Line LOVELAND 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1		11.93%	14.34%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-34	SANTYSBL 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1		11.85%	12.97%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-35	PENDLETN 69 KV	L_25044_Line PA GEN 69.0 to PALA 69.0 Ckt 1 L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1	C	L-1-1	9.82%	8.88%	10.08%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-36	POWAY 69 KV	L_25006_Line BERNARDO 69.0 to R.CARMEL 69.0 Ckt 1 L_25048_Line POWAY 69.0 to POMERADO 69.0 Ckt 1	C	L-1-1	12.02%	16.05%	17.74%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-37	R.CARMEL 69 KV	L_25006_Line BERNARDO 69.0 to R.CARMEL 69.0 Ckt 1 L_25048_Line POWAY 69.0 to POMERADO 69.0 Ckt 1	C	L-1-1	12.13%	16.29%	18.01%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-38	WARCYNTP 69 KV	L_25006_Line BERNARDO 69.0 to R.CARMEL 69.0 Ckt 1 L_25048_Line POWAY 69.0 to POMERADO 69.0 Ckt 1	C	L-1-1	10.23%	13.65%	15.10%	Customers are supplied by local Network. Further evaluation
SD-A-SP-VD-39	WARENCYN 69 KV	L_25006_Line BERNARDO 69.0 to R.CARMEL 69.0 Ckt 1 L_25048_Line POWAY 69.0 to POMERADO 69.0 Ckt 1	C	L-1-1	10.23%	13.66%	15.11%	Customers are supplied by local Network. Further evaluation

Voltage Deviations

ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %			Potential Mitigation Solutions
					2015 Summer Off-Peak	2018 Summer Light Load	N/A	
SD-A-NP-VD-1	SUNCREST 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	L-1	-6.0%			Post-SONGS Transmission Strengthen Plan TBD
SD-A-NP-VD-2	OCOTILLO 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	L-1	-5.9%			Ocotillo is a generator bus. Mitigation will be in accord with the interconnection agreement provisions.
SD-A-NP-VD-3	OCOTILLO 1 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	L-1	-5.9%			Ocotillo is a generator bus. Mitigation will be in accord with the interconnection agreement provisions.
SD-A-NP-VD-4	CRSTNTS 69 KV	L_26018_Line BASILONE 69.0 to JAP MESA 69.0 Ckt 1	B	L-1		-6.7%		Post-cont. volt. within SDG&E's acceptable operational voltage limits.
SD-A-NP-VD-5	BASILONE 69 KV	L_26018_Line BASILONE 69.0 to JAP MESA 69.0 Ckt 1	B	L-1		-7.4%		Post-cont. volt. within SDG&E's acceptable operational voltage limits.
SD-A-NP-VD-6	ENCNITAS 69 KV	L_24015_Line ENCNITAS 69.0 to DEL MAR 69.0 Ckt 1	B	L-1	5.3%			Post-cont. volt. within SDG&E's acceptable operational voltage limits.
SD-A-NP-VD-7	JAP MESA 69 KV	L_26008_Line LASPULGS 69.0 to JAP MESA 69.0 Ckt 1	B	L-1		-6.5%		Post-cont. volt. within SDG&E's acceptable operational voltage limits.
SD-A-NP-VD-8	MESA RIM 69 KV	LD_MRMA_LD_MRM OPEN 675 PEAK MRM/MR/SS	B	L-1	5.4%	6.7%		Post-cont. volt. within SDG&E's acceptable operational voltage limits.

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Study Area: **San Diego Area - Summer Peak**

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-SP-V-1	OCOTIL&1 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	G-1/L-1	1.11			Ocotillo is a generator bus. Mitigation will be in accord with the interconnection agreement provisions.
SD-SP-V-2	OCOTILLO 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	L-1	1.12			Ocotillo is a generator bus. Mitigation will be in accord with the interconnection agreement provisions.
SD-SP-V-3	OCOTILLO 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	G-1/L-1	1.13	1.11		Ocotillo is a generator bus. Mitigation will be in accord with the interconnection agreement provisions.
SD-SP-V-4	SNCRSMP1 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	L-1	1.11			Post-SONGS Transmission Strengthen Plan TBD
SD-SP-V-5	SNCRSMP1 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	G-1/L-1	1.12	1.11		Post-SONGS Transmission Strengthen Plan TBD
SD-SP-V-6	SNCRSMP2 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	L-1	1.11			Post-SONGS Transmission Strengthen Plan TBD
SD-SP-V-7	SNCRSMP2 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	G-1/L-1	1.12	1.11		Post-SONGS Transmission Strengthen Plan TBD
SD-SP-V-8	SUNCREST 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	L-1	1.12			Post-SONGS Transmission Strengthen Plan TBD
SD-SP-V-9	SUNCREST 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	G-1/L-1	1.13	1.12	1.07	Post-SONGS Transmission Strengthen Plan TBD
SD-SP-V-10	OCOTILLO 1 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	L-1	1.12			Post-SONGS Transmission Strengthen Plan TBD
SD-SP-V-11	OCOTILLO 1 500 KV	L_50004_Line IMPRLVLY 500.0 to OCOTILLO 500.0 Ckt 1	B	G-1/L-1	1.13	1.11		Post-SONGS Transmission Strengthen Plan TBD
SD-SP-V-12	BOULEVRD 69 KV	L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	B	L-1	1.11			Further evaluation
SD-SP-V-13	BOULEVRD 69 KV	L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1 L_50003_Line HDWSH 500.0 to N.GILA 500.0 Ckt 1	C	L-1-1	1.13			Further evaluation

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Study Area: **San Diego Area - Summer Peak**

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-SP-V-14	BOULEVRD 69 KV	L_50006_Line N.GILA 500.0 to IMPRLVLY 500.0 Ckt 1 L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1	C	L-1-1	1.11			Further evaluation
SD-SP-V-15	BOULEVRD 138 KV	L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1 L_50003_Line HDWSH 500.0 to N.GILA 500.0 Ckt 1	C	L-1-1	1.11			Further evaluation
SD-SP-V-16	ECO 138 KV	L_50008_Line ECO 500.0 to MIGUEL 500.0 Ckt 1 L_50003_Line HDWSH 500.0 to N.GILA 500.0 Ckt 1	C	L-1-1	1.11			Further evaluation
SD-SP-V-17	WARNERS 69 KV	L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1 L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1	C	L-1-1		0.88	0.88	Customers are supplied by local Network. Further evaluation
SD-SP-V-18	BLDCRKTP 69 KV	L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1 L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1	C	L-1-1		0.88	0.88	Customers are supplied by local Network. Further evaluation
SD-SP-V-19	BOLDRCRK 69 KV	L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1 L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1	C	L-1-1		0.88	0.88	Customers are supplied by local Network. Further evaluation
SD-SP-V-20	SANTYSBL 69 KV	L_23009_Line CREELMAN 69.0 to LOSCOCHS 69.0 Ckt 1 L_21006_Line CREELMAN 69.0 to SYCAMORE 69.0 Ckt 1	C	L-1-1		0.84	0.85	Customers are supplied by local Network. Further evaluation

ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-SP-V-21	BLDCRKTP 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	0.86	0.79	0.79	Customers are supplied by local Network. Further evaluation
SD-SP-V-22	BOLDRCRK 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	0.86	0.79	0.79	Customers are supplied by local Network. Further evaluation
SD-SP-V-23	DESCANSO 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	0.75	0.66	0.65	Customers are supplied by local Network. Further evaluation
SD-SP-V-24	GLNCLFTP 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	0.74	0.66	0.65	Customers are supplied by local Network. Further evaluation
SD-SP-V-25	GLENCLIF 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	0.74	0.66	0.65	Customers are supplied by local Network. Further evaluation
SD-SP-V-26	KUMEYAAY 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	0.73	0.65	0.64	Customers are supplied by local Network. Further evaluation
SD-SP-V-27	CRESTWD 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	0.73	0.65	0.64	Customers are supplied by local Network. Further evaluation

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Study Area: **San Diego Area - Summer Peak**

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-SP-V-28	CAMERON 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	0.73	0.64	0.63	Customers are supplied by local Network. Further evaluation
SD-SP-V-29	BARRETT 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	0.73	0.63	0.62	Customers are supplied by local Network. Further evaluation
SD-SP-V-30	LOVELAND 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	0.73	0.63	0.62	Customers are supplied by local Network. Further evaluation
SD-SP-V-31	ALPINE 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1	0.72	0.62	0.61	Customers are supplied by local Network. Further evaluation
SD-SP-V-32	SANTYSBL 69 KV	L_23020_Line LOSCOCHS 69.0 to ALPINE 69.0 Ckt 1 L_23023_Line LOSCOCHS 69.0 to LOVELAND 69.0 Ckt 1	C	L-1-1		0.87	0.87	Customers are supplied by local Network. Further evaluation
SD-SP-V-33	PENDLETN 69 KV	L_25044_Line PA GEN 69.0 to PALA 69.0 Ckt 1 L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1	C	L-1-1	0.90	0.88	0.87	Customers are supplied by local Network. Further evaluation
SD-SP-V-34	MNSRATTP 69 KV	L_25044_Line PA GEN 69.0 to PALA 69.0 Ckt 1 L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1	C	L-1-1		0.89	0.89	Customers are supplied by local Network. Further evaluation

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Study Area: **San Diego Area - Summer Peak**

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
SD-SP-V-35	MONSRATE 69 KV	L_25044_Line PA GEN 69.0 to PALA 69.0 Ckt 1 L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1	C	L-1-1		0.89	0.89	Customers are supplied by local Network. Further evaluation
SD-SP-V-36	AVCADOTP 69 KV	L_25044_Line PA GEN 69.0 to PALA 69.0 Ckt 1 L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1	C	L-1-1		0.89	0.89	Customers are supplied by local Network. Further evaluation
SD-SP-V-37	AVOCADO 69 KV	L_25044_Line PA GEN 69.0 to PALA 69.0 Ckt 1 L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1	C	L-1-1		0.88	0.88	Customers are supplied by local Network. Further evaluation
SD-SP-V-38	R.CARMEL 69 KV	L_25006_Line BERNARDO 69.0 to R.CARMEL 69.0 Ckt 1 L_25048_Line POWAY 69.0 to POMERADO 69.0 Ckt 1	C	L-1-1	0.89	0.81	0.80	Customers are supplied by local Network. Further evaluation
SD-SP-V-39	WARENCYN 69 KV	L_25006_Line BERNARDO 69.0 to R.CARMEL 69.0 Ckt 1 L_25048_Line POWAY 69.0 to POMERADO 69.0 Ckt 1	C	L-1-1		0.85	0.84	Customers are supplied by local Network. Further evaluation
SD-SP-V-40	POWAY 69 KV	L_25006_Line BERNARDO 69.0 to R.CARMEL 69.0 Ckt 1 L_25048_Line POWAY 69.0 to POMERADO 69.0 Ckt 1	C	L-1-1		0.82	0.81	Customers are supplied by local Network. Further evaluation

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Study Area: **San Diego Area- Summer Off-Peak & Summer Light Load**

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)			Potential Mitigation Solutions
					2015 Summer Off-Peak	2018 Summer Light Load	N/A	
SD-A-NP-V-1	CRSTNTS 69 KV	L_26018_Line BASILONE 69.0 to JAP MESA 69.0 Ckt 1	B	L-1	1.11	-	-	Further evaluation
SD-A-NP-V-2	BOULEVRD 69 KV	L_50001_Line HASSYAMP 500.0 to HDWSH 500.0 Ckt 1	B	L-1	1.12	-	-	Further evaluation
SD-A-NP-V-3	LASPULGS 69 KV	L_24025_Line OCNSDETP 69.0 to STUARTTP 69.0 Ckt 1	B	L-1	1.11	-	-	Further evaluation
SD-A-NP-V-4	PENDLETN 69 KV	L_24028_Line PENDLETN 69.0 to SANLUSRY 69.0 Ckt 1	B	L-1	1.12	-	-	Further evaluation

Post-Transient Voltage Deviations

ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %			Potential Mitigation Solutions
					2015 Summer Peak	2018 Summer Peak	2023 Summer Peak	
X-SP-PTVD-1	SDGE System	Otay Mesa Plant outage followed by N.GILA 500.0 to IMPRLVLY 500.0 Ckt 1 Outage with Otaymesa-TJI cross-tripping	C	G-1/L-1	diverged	diverged	diverged	Post-SONGS Transmission Strengthen Plan TBD
X-SP-PTVD-2	SDGE System	OCOTILLO to SUNCREST 500KV Ckt 1 Outage followed by ECO to MIGUEL 500kV Ckt 1	C	L-1-1	diverged	diverged	diverged	Post-SONGS Transmission Strengthen Plan TBD

Study Area: **San Diego Area - Summer Peak**



Single Contingency Load Drop

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

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

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Study Area: **San Diego Area- Summer Off-Peak & Summer Light Load**



Single Contingency Load Drop

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

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

Study Area: **San Diego Area - Summer Peak**



Single Source Substation with more than 100 MW Load

ID	Substation	Load Served (MW)			Potential Mitigation Solutions
		Select..	Select..	Select..	

No single source substation with more than 100 MW Load

Study Area: **San Diego Area- Summer Off-Peak & Summer Light Load**



Single Source Substation with more than 100 MW Load

ID	Substation	Load Served (MW)			Potential Mitigation Solutions
		Select..	Select..	Select..	

No single source substation with more than 100 MW Load