



ID	Overloaded Facility	Worst Contingencies	Category	Category Description	Loading (%)						Potential Mitigation Solutions
					2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022SP Heavy Renewables & Min Gas Gen	
EOL-T-1	System diverge	Eldorado 500/230kV Transformer No.5	P1	Single contingency	Nconv	Nconv	Nconv	<95	Nconv	<95	Ivanpah RAS
EOL-T-2	Ivanpah 230/115kV Transformer No.1	Ivanpah 230/115kV Transformer No.2 & Ivanpah-Mountain Pass 115kV line	P6	Two overlapping singles	<95	<95	<95	<95	109.91	109.10	Ivanpah RAS
EOL-T-3	Ivanpah 230/115kV Transformer No.2	Ivanpah 230/115kV Transformer No.1 & Ivanpah-Mountain Pass 115kV line	P6	Two overlapping singles	<95	<95	<95	<95	109.91	109.10	Ivanpah RAS
EOL-T-4	Ivanpah-Mountain Pass 115kV Line	Ivanpah 230/115kV Transformer Nos. 1&2	P6	Two overlapping singles	133.94	134.56	134.21	<95	<95	Nconv	Ivanpah RAS
EOL-T-5	System diverge	Eldorado N/S bus Section A	P5	Fault plus relay failure to operate	Nconv	Nconv	Nconv	<95	Nconv	Nconv	Install redundant relay
EOL-T-6	System diverge	Lugo E/W Bus	P5	Fault plus relay failure to operate	Nconv	Nconv	Nconv	<95	Nconv	Nconv	Install redundant relay
EOL-T-7	System diverge	Ivanpah-Eldorado & Primm-Eldorado 230kV lines	P6	Two overlapping singles	Nconv	Nconv	Nconv	<95	Nconv	Nconv	Ivanpah RAS



ID	Substation	Worst Contingencies	Category	Category Description	Post Cont. Voltage Deviation %						Potential Mitigation Solutions
					2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022SP Heavy Renewables & Min Gas Gen	
EOL-VD-1											

Study Area: **SCE East of Lugo**

High/Low Voltage



ID	Substation	Worst Contingencies	Category	Category Description	Voltage (PU)						Potential Mitigation Solutions
					2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022SP Heavy Renewables & Min Gas Gen	
EOL-V-1											
EOL-V-2											
X-V-3											
X-V-4											
X-V-5											
X-V-6											
X-V-7											
X-V-8											
X-V-9											
X-V-10											
X-V-11											
X-V-12											
X-V-13											
X-V-14											
X-V-15											
X-V-16											
X-V-17											
X-V-18											
X-V-19											

Study Area: SCE East of Lugo

Transient Stability



ID	Contingency	Category	Category Description	Transient Stability Performance						Potential Mitigation Solutions
				2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022SP Heavy Renewables & Min Gas Gen	
EOL-TS-1	Bulk_P1_EIDorado_5AA_RAS	P1	Normal clearing	Stable	Stable	Stable	Stable	Stable	Stable	
EOL-TS-2	Main_P5-5_Eldorado230	P5.5	Non-redundant relay failure	Stable	Stable	Stable	Stable	Stable	Stable	
EOL-TS-3	Main_P5-5_EldoradoB230	P5.5	Non-redundant relay failure	Stable	Stable	Stable	Stable	Stable	Stable	
EOL-TS-4	Bulk_EOL_Lugo-EID-Mh-500_RAS	P7	Normal clearing	Stable	Stable	Stable	Stable	Stable	Stable	
EOL-TS-5										
EOL-TS-6										
EOL-TS-7										
EOL-TS-8										
EOL-TS-9										
EOL-TS-10										
EOL-TS-11										
EOL-TS-12										
EOL-TS-13										
EOL-TS-14										
EOL-TS-15										
EOL-TS-16										
EOL-TS-17										
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EOL-TS-22										
EOL-TS-23										
EOL-TS-24										
EOL-TS-25										
EOL-TS-26										
EOL-TS-27										
EOL-TS-28										
EOL-TS-29										
EOL-TS-30										
EOL-TS-31										

Study Area: **SCE East of Lugo**



Single Contingency Load Drop

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

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

Study Area: **SCE East of Lugo**



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..	Select..	Select..	
X-SS-1												

No single source substation with more than 100 MW Load