



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	S1- 2021SP High CEC Load	S2- 2018SP No BTM PV	S3 - 2021SP No BTM PV	S4 - 2021 SP Heavy Renewable & Min Gas Gen	S5 - 2018 SP All Redondo Units On	
METRO-T-1	MIRALOMA 500/230 KV #4	MIRALOMA – SERRANO 500 KV #2 & LUGO – RANCHVST 500 KV	P6	L-1/L-1	124.31	<100	<100	<100	<100	<100	130.49	<100	<100	127.70	System adjustments after initial or second contingency including looping-in the Rancho Vista-Serrano line into Mira Loma.
METRO-T-2	MIRALOMA 500/230 KV #1 OR #2	MIRALOMA 500/230 KV #2 OR #1 & MIRALOMA – SERRANO 500 KV #2	P6	T-1/L-1	110.79	<100	<100	<100	<100	<100	115.10	<100	<100	112.60	System adjustments after initial or second contingency including looping-in the Rancho Vista-Serrano line into Mira Loma.
METRO-T-3	SERRANO 500/230 KV #1, #2, OR #3	TWO SERRANO 500/230 KV TRANSFORMERS	P6	T-1/T-1	121.70	108.93	101.99	<100	<100	113.53	118.56	108.84	110.96	127.30	1. Energize available spare single phase transformers (approx. 24 hrs.); perform system adjustments per existing operating procedures until spares can be energized. 2. Install live 3-phase spare AA bank
METRO-T-4	MIRALOMA–SERRANO 500 KV #2	LUGO–RANCHVST 500 KV & PALOVRDE–COLRIVER 500 KV	P6	L-1/L-1	102.03	<100	<100	<100	<100	<100	105.58	<100	<100	105.10	Dispatch generation in LA Basin or loop-in Rancho Vista-Serrano line into Mira Loma after initial or second contingency.
METRO-T-5	LA FRESA–REDONDO #1 OR #2 230 KV	REDONDO–LIGHTHIPE & LA FRESA–REDONDO #1 OR #2 230 KV	P6	L-1/L-1	<100	<100	<100	<100	<100	<100	<100	<100	<100	116.10	Reduce local generation after initial contingency
METRO-T-6	REDONDO–LIGHTHIPE 230 KV	LA FRESA–REDONDO #1 & #2 230 KV	P7	L-2	<100	<100	<100	<100	<100	<100	<100	<100	<100	134.40	Limit local generation temporarily (for the duration of planned construction outage)

Study Area: SCE Metro

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	S1- 2021SP High CEC Load	S2- 2018SP No BTM PV	S3 - 2021SP No BTM PV	S4 - 2021 SP Heavy Renewable & Min Gas Gen	S5 - 2018 SP All Redondo Units On	
METRO-T-7	LIGHTHIPE–HINSON 230 KV	LA FRESA–REDONDO #1 & #2 230 KV	P7	L-2	<100	<100	<100	<100	<100	<100	<100	<100	<100	102.70	Limit local generation temporarily (for the duration of planned construction outage)

Study Area: SCE Metro

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	S1- 2021SP High CEC Load	S2- 2018SP No BTM PV	S3 - 2021SP No BTM PV	S4 - 2021 SP Heavy Renewable & Min Gas Gen	S5 - 2018 SP All Redondo Units On	

No high/low voltage deviations identified.

Study Area: SCE Metro

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	S1- 2021SP High CEC Load	S2- 2018SP No BTM PV	S3 - 2021SP No BTM PV	S4 - 2021 SP Heavy Renewable & Min Gas Gen	S5 - 2018 SP All Redondo Units On	

No high/low voltages identified.

Study Area: SCE Metro

Transient Stability



ID	Contingency	Category	Category Description	Transient Stability Performance										Potential Mitigation Solutions
				2018 Summer Peak	2021 Summer Peak	2026 Summer Peak	2018 Spring Off-Peak	2021 Spring Light Load	S1- 2021SP High CEC Load	S2- 2018SP No BTM PV	S3 - 2021SP No BTM PV	S4 - 2021 SP Heavy Renewable & Min Gas Gen	S5 - 2018 SP All Redondo Units On	
X-TS-1														
X-TS-2														
X-TS-3														

No transient stability issues identified.

Study Area: SCE Metro



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..	Select..	Select..	
X-SLD-1														

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

Study Area: SCE Metro



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