

Study Area: **SCE**

High/Low Voltage

ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)			Potential Mitigation Solutions
					2013	N/A	N/A	
SCE-P-V-1	San Onofre 230kV Switchyard	Sunrise Powerlink, system adjusted, followed by Southwest Powerlink 500kV line	C	L-1-1	Diverge			Install 280 MVAR reactive support in southern Orange County area (this can be mitigated by installing 280 MVAR synchronous condensers at Huntington Beach switchyard). RMR designation of Huntington Beach units 3 & 4 for conversion to synchronous condensers can help provide this reactive support need.

Study Area: **SCE**



Post-Transient Thermal Overloads

ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2013	N/A	N/A	
SCE-PTT-1	Barre - Ellis 230kV #1 (or #2) line	North Gila - Imperial Valley 500kV, followed by Barre - Ellis 230kV #2 (or #1) line	C	L-1-1	133%			Reconfigure Barre - Ellis 230kV line from 2 to 4 circuits

**Post-Transient Voltage Deviations**

ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %			Potential Mitigation Solutions
					2013	N/A	N/A	
SDG&E-P-V-1	All substations in San Diego area	Sunrise Powerlink, system adjusted, followed by Southwest Powerlink 500kV line	C	L-1-1	Diverge			Install 280 MVAR reactive support in southern Orange County area (this can be mitigated by installing 280 MVAR synchronous condensers at Huntington Beach switchyard). RMR designation of Huntington Beach units 3 & 4 for conversion to synchronous condensers can help provide this reactive support need.
SCE-P-V-1	All substations in southern Orange County area	Sunrise Powerlink, system adjusted, followed by Southwest Powerlink 500kV line	C	L-1-1	Diverge			See above
SCE-P-V-2	Viejo 230kV and 66kV	Same as above, but with Huntington Beach synchronous condensers modeled to obtain post-transient solution	C	L-1-1	11.90%			Mitigation for SCE-P-V-2 and SCE-P-V-3 includes installation of additional reactive supports at Santiago (80 MVAR), Johanna (80 MVAR) and Viejo (2x80 MVAR). In the event that only 1x80 MVAR is available at Viejo Substation, the other 80 MVAR can be installed at SDG&E's Talega Substation.
SCE-P-V-3	San Onofre 230kV	Same as above, but with Huntington Beach synchronous condensers modeled to obtain post-transient solution	C	L-1-1				Please see the above mitigation plan