

2013/2014 ISO Reliability Assessment - Preliminary Study Results

Study Area: **SCE Eastern 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	
Eastern-SP-T-1	Julian Hinds SCE–MWD 230 kV bus tie	Julian Hinds–Mirage 230 kV line (Bythe RAS tripping one CTG unit)	B	L-1	<100	102	102	One or more of the following mitigations will be considered to address the issues identified in this area: (1) Upgrade the rating of the bus-tie (2) Open Eagle Mountain–Blythe 161 kV line after first contingency (3) return Mead–Camino West 230 kV line to service (4) Remove clearance limitations to increase rating of the Julian Hinds–Mirage 230 kV line (5) add reactive power support
		Julian Hinds–Mirage & Iron Mountain–Camino–Mead–Gene 230 kV lines (Bythe RAS tripping one CTG unit)(Note 1)	C	L-1/L-1	<100	107	104	
		Julian Hinds–Mirage & Eagle Mountain–Iron Mountain 230 kV lines (Bythe RAS tripping one CTG unit)(Note 1)	C	L-1/L-1	<100	109	106	
		Julian Hinds–Mirage & Parker–Gene 230 kV lines (Bythe RAS tripping one CTG unit) (Note 1)	C	L-1/L-1	<100	102	102	
Eastern-SP-T-2	Eagle Mountain–Blythe 161 kV line	Julian Hinds–Mirage & Iron Mountain–Camino–Mead–Gene 230 kV lines (Bythe RAS tripping one CTG unit) (Note 1)	C	L-1/L-1	<100	109	106	
		Julian Hinds–Mirage & Eagle Mountain–Iron Mountain 230 kV lines (Bythe RAS tripping one CTG unit) (Note 1)	C	L-1/L-1	<100	122	118	

Note 1: The existing Blythe RAS is designed to trip the Blythe gen tie if the overload persists after one unit is tripped. This RAS action could lead to post transient instability

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	
Eastern-NP-T-1	Julian Hinds SCE–MWD 230 kV bus tie	Julian Hinds–Mirage 230 kV line (Bythe RAS tripping one CTG unit)	B	L-1	<100	103	-	One or more of the following mitigations will be considered to address the issues identified in this area: (1) Upgrade the rating of the bus-tie (2) Open Eagle Mountain–Blythe 161 kV line after first contingency (3) return Mead–Camino West 230 kV line to service (4) Remove clearance limitations to increase rating of the Julian Hinds–Mirage 230 kV line (5) add reactive power support
		Julian Hinds–Mirage & Iron Mountain–Camino–Mead–Gene 230 kV lines (Bythe RAS tripping one CTG unit)(Note 1)	C	L-1/L-1	<100	110	-	
		Julian Hinds–Mirage & Eagle Mountain–Iron Mountain 230 kV lines (Bythe RAS tripping one CTG unit)(Note 1)	C	L-1/L-1	<100	112	-	
		Julian Hinds–Mirage & Parker–Gene 230 kV lines (Bythe RAS tripping one CTG unit) (Note 1)	C	L-1/L-1	<100	103	-	
Eastern-NP-T-2	Eagle Mountain–Blythe 161 kV line	Julian Hinds–Mirage & Iron Mountain–Camino–Mead–Gene 230 kV lines (Bythe RAS tripping one CTG unit) (Note 1)	C	L-1/L-1	<100	107	-	
		Julian Hinds–Mirage & Eagle Mountain–Iron Mountain 230 kV lines (Bythe RAS tripping one CTG unit) (Note 1)	C	L-1/L-1	<100	119	-	

Note 1: The existing Blythe RAS is designed to trip the Blythe gen tie if the overload persists after one unit is tripped. This RAS action could lead to post transient instability

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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: **SCE Eastern 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.

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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

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Study Area: **SCE Eastern 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