

Study Area: **SCE North of Lugo - Summer Peak**

Thermal Overloads



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2016 Summer Peak	2019 Summer Peak	2024 Summer Peak	

No thermal overload concerns identified.



Thermal Overloads

ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2016 Summer Off-Peak	2019 Summer Light Load	N/A	

No thermal overload concerns identified.

2014-2015 ISO Reliability Assessment - Preliminary Study Results

Study Area: **SCE North of Lugo - Summer Peak**

Voltage Deviations



ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %			Potential Mitigation Solutions
					2016 Summer Peak	2019 Summer Peak	2024 Summer Peak	
NOL-SP-VD-1	OXBOW A 230 kV	line_36_Line CSA DIAB-SHERWIN-CONTROL 115.0 ck 1 + line_24_Line CSA DIAB - CONTROL 115.0 ck 1	C	N-1-1	-11.61%	<10%	<10%	Confirm if Oxbow units can provide reactive power absorption or operational action plan to reduce voltage in the area
NOL-SP-VD-2	OXBOW A 230 kV	line_36_Line CSA DIAB-SHERWIN-CONTROL 115.0 ck 1 + line_24_Line CSA DIAB - CONTROL 115.0 ck 1	C	N-1-1	-10.32%	<10%	<10%	Confirm if Oxbow units can provide reactive power absorption or operational action plan to reduce voltage in the area



Voltage Deviations

ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %			Potential Mitigation Solutions
					2016 Summer Off-Peak	2019 Summer Light Load	N/A	

No voltage deviation concerns identified.

2014-2015 ISO Reliability Assessment - Preliminary Study Results

Study Area: **SCE North of Lugo - Summer Peak**

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)			Potential Mitigation Solutions
					2016 Summer Peak	2019 Summer Peak	2024 Summer Peak	
NOL-SP-V-2	INYO 115 kV	line_24_Line CSA DIAB - CONTROL 115.0 ck 1 + line_36_Line CSA DIAB-SHERWIN-CONTROL 115.0 ck 1	C	N-1-1	1.1071	<1.1	<1.1	Confirm if Oxbow units can provide reactive power absorption or operational action plan to reduce voltage in the area
NOL-SP-V-3	CONTROL 115 kV	line_24_Line CSA DIAB - CONTROL 115.0 ck 1 + line_36_Line CSA DIAB-SHERWIN-CONTROL 115.0 ck 1	C	N-1-1	1.1088	<1.1	<1.1	Confirm if Oxbow units can provide reactive power absorption or operational action plan to reduce voltage in the area
NOL-SP-V-4	OXBOW A 230 kV	line_24_Line CSA DIAB - CONTROL 115.0 ck 1 + line_36_Line CSA DIAB-SHERWIN-CONTROL 115.0 ck 1	C	N-1-1	1.1373	<1.1	1.1044	Confirm if Oxbow units can provide reactive power absorption or operational action plan to reduce voltage in the area
NOL-SP-V-5	OXBOW B 115 kV	line_24_Line CSA DIAB - CONTROL 115.0 ck 1 + line_36_Line CSA DIAB-SHERWIN-CONTROL 115.0 ck 1	C	N-1-1	1.1088	<1.1	<1.1	Confirm if Oxbow units can provide reactive power absorption or operational action plan to reduce voltage in the area
NOL-SP-V-6	OXBOW B 230 kV	line_24_Line CSA DIAB - CONTROL 115.0 ck 1 + line_36_Line CSA DIAB-SHERWIN-CONTROL 115.0 ck 1	C	N-1-1	1.1144	<1.1	<1.1	Confirm if Oxbow units can provide reactive power absorption or operational action plan to reduce voltage in the area



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)			Potential Mitigation Solutions
					2016 Summer Off-Peak	2019 Summer Light Load	N/A	

No high/low voltage concerns identified.



ID	Contingency	Category	Category Description	Transient Stability Performance			Potential Mitigation Solutions
				2016 Summer Peak	2019 Summer Peak	2024 Summer Peak	

No transient stability concerns identified.



Transient Stability

ID	Contingency	Category	Category Description	Transient Stability Performance			Potential Mitigation Solutions
				2016 Summer Off-Peak	2019 Summer Light Load	N/A	

No transient stability concerns identified.



Post-Transient Thermal Overloads

ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2016 Summer Peak	2019 Summer Peak	2024 Summer Peak	

No post-transient thermal overload concerns identified.



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)			Potential Mitigation Solutions
					2016 Summer Off-Peak	2019 Summer Light Load	N/A	

No post-transient thermal overload concerns identified.



Post-Transient Voltage Deviations

ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %			Potential Mitigation Solutions
					2016 Summer Peak	2019 Summer Peak	2024 Summer Peak	

No post-transient voltage deviation concerns identified.



Post-Transient Voltage Deviations

ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %			Potential Mitigation Solutions
					2016 Summer Off-Peak	2019 Summer Light Load	N/A	

No post-transient voltage deviations concerns identified.

Study Area: **SCE North of Lugo - Summer Peak**



Single Contingency Load Drop

ID	Worst Contingency	Category	Category Description	Amount of Load Drop (MW)			Potential Mitigation Solutions
				2016 Summer Peak	2019 Summer Peak	2024 Summer Peak	

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

Single Contingency Load Drop

ID	Worst Contingency	Category	Category Description	Amount of Load Drop (MW)			Potential Mitigation Solutions
				2016 Summer Off-Peak	2019 Summer Light Load	N/A	

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

Study Area: **SCE North of Lugo - Summer Peak**

Single Source Substation with more than 100 MW Load



ID	Substation	Load Served (MW)			Potential Mitigation Solutions
		2016 Summer Peak	2019 Summer Peak	2024 Summer Peak	

No single source substation with more than 100 MW Load

2014-2015 ISO Reliability Assessment - Preliminary Study Results

Study Area: **SCE North of Lugo - Summer Off-Peak & Summer Light Load**

Single Source Substation with more than 100 MW Load



ID	Substation	Load Served (MW)			Potential Mitigation Solutions
		2016 Summer Off-Peak	2019 Summer Light Load	N/A	

No single source substation with more than 100 MW Load