

Thermal Overloads

ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)								Potential Mitigation Solutions
					2017 Summer Peak	2020 Summer Peak	2025 Summer Peak	2017 Spring Off-Peak	2020 Spring Light Load	2020 Summer Peak with Low Hydro	N/A	N/A	
BC&T-T-1	MAGUNDEN-VESTAL 230 kV 1 or 2	MAGUNDEN-VESTAL 230 kV 2 or 1	P1	N-1	< 100	< 100	< 100	< 100	< 100	100.00			(a) Thyristor Controlled Series Capacitor. (b) Manage hydro generation to utilize during peak hours. (c) Modify RAS arming for low hydro conditions. (d) Additional new Preferred Resources and Energy Storage.
BC&T-T-2	MAGUNDEN-VESTAL 230 kV 1 or 2	MAGUNDEN-VESTAL 230 kV 2 or 1 and Gen WELLGEN 13.8 Unit ID 1	P3	N-1/G-1	< 100	< 100	< 100	< 100	< 100	109.60			
BC&T-T-3	MAGUNDEN-VESTAL 230 kV 1 or 2	MAGUNDEN-VESTAL 230 kV 2 or 1 and SPRINGVL-BIG CRK4 230 kV 1	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	100.30			
BC&T-T-4	MAGUNDEN-VESTAL 230 kV 1 or 2	MAGUNDEN-VESTAL 230 kV 2 or 1 and BIG CRK1-RECTOR 230 kV 1	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	102.30			
BC&T-T-5	MAGUNDEN-VESTAL 230 kV 1 or 2	MAGUNDEN-VESTAL 230 kV 2 or 1 and BIG CRK3-RECTOR 230 kV 1 or 2	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	103.20			
BC&T-T-6	MAGUNDEN-VESTAL 230 kV 1 or 2	MAGUNDEN-VESTAL 230 kV 2 or 1 and MAGUNDEN-SPRINGVL 230 kV 2	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	107.20			
BC&T-T-7	MAGUNDEN-VESTAL 230 kV 1 or 2	MAGUNDEN-VESTAL 230 kV 2 or 1 and MAGUNDEN-SPRINGVL 230 kV 1	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	109.70			
BC&T-T-8	MAGUNDEN-VESTAL 230 kV 1 or 2	MAGUNDEN-VESTAL 230 kV 2 or 1 and SPRINGVL-RECTOR 230 kV 1	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	112.20			
BC&T-T-9	MAGUNDEN-VESTAL 230 kV 1 or 2	MAGUNDEN-VESTAL 230 kV 2 and PASTORIA-PSTRIA 230 kV 1	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	103.00			
BC&T-T-10	RECTOR-VESTAL 230 kV 1 or 2	RECTOR-VESTAL 230 kV 2 or 1 and SPRINGVL-RECTOR 230 kV 1	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	103.00			
BC&T-T-11	RECTOR-VESTAL 230 kV 1 or 2	RECTOR-VESTAL 230 kV 2 or 1 and Gen B CRK2-1 13.8 Unit ID 1 or 2	P3	N-1/G-1	< 100	< 100	< 100	< 100	< 100	101.70			
BC&T-T-12	RECTOR-VESTAL 230 kV 1 or 2	MAGUNDEN-SPRINGVL 230 kV 1 and RECTOR-VESTAL 230 kV 2 or 1	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	102.60			
BC&T-T-13	RECTOR-VESTAL 230 kV 1 or 2	RECTOR-VESTAL 230 kV 2 or 1 and MAGUNDEN-SPRINGVL 230 kV 1	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	124.80			
BC&T-T-14	RECTOR-VESTAL 230 kV 1 or 2	RECTOR-VESTAL 230 kV 2 or 1 and MAGUNDEN-SPRINGVL 230 kV 2	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	121.20			
BC&T-T-15	MAGUNDEN-SPRINGVL 230 kV 2	RECTOR-VESTAL 230 kV 1 or 2 and MAGUNDEN-SPRINGVL 230 kV 1	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	100.70			



ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %								Potential Mitigation Solutions
					2017 Summer Peak	2020 Summer Peak	2025 Summer Peak	2017 Spring Off-Peak	2020 Spring Light Load	2020 Summer Peak with Low Hydro	N/A	N/A	

No voltage deviation concerns identified.

Study Area: **SCE Tehachapi & Big Creek Corridor**

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)								Potential Mitigation Solutions
					2017 Summer Peak	2020 Summer Peak	2025 Summer Peak	2017 Spring Off-Peak	2020 Spring Light Load	2020 Summer Peak with Low Hydro	N/A	N/A	

No high/low voltage concerns identified.

Transient Stability

ID	Contingency	Category	Category Description	Transient Stability Performance								Potential Mitigation Solutions
				2017 Summer Peak	2020 Summer Peak	2025 Summer Peak	2017 Spring Off-Peak	2020 Spring Light Load	2020 Summer Peak with Low Hydro	N/A	N/A	
BC&T-TS-1	Big Creek 1-Big Creek 2 230 kV line	P5	N-1	local area instability	local area instability	local area instability	local area instability	local area instability	local area instability			Approved project to Install the second (dual) high speed protection for this line.



Single Contingency Load Drop

ID	Worst Contingency	Category	Category Description	Amount of Load Drop (MW)								Potential Mitigation Solutions
				2017 Summer Peak	2020 Summer Peak	2025 Summer Peak	2017 Spring Off-Peak	2020 Spring Light Load	2020 Summer Peak with Low Hydro	N/A	N/A	

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

Single Source Substation with more than 100 MW Load

ID	Substation	Load Served (MW)								Potential Mitigation Solutions
		2017 Summer Peak	2020 Summer Peak	2025 Summer Peak	2017 Spring Off-Peak	2020 Spring Light Load	2020 Summer Peak with Low Hydro	N/A	N/A	

No single source substation with more than 100 MW Load