2026-2027 ISO Reliability Assessment - Study Results
Study Area: SCE North of Lugo
Thermal Overloads

California ISO

Overloaded Facility	Contingency (All and Worst P6)	Category	Category Description	Loading % (Baseline Scenarios)						Loading % (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 Spring OP Sensitivity	
24085 LUGO 230 24192 lugo 1i 13.8 1 1	P6_1321_P6 Loss of Lugo-Pisgah No.1 230 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	113.5	< 100	< 100	Existing High Desert Power Project RAS and Planned Victor CRAS
	P6_1418_P6 Loss of Pisgah-Eldordo No.1 230 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	114.8	< 100	153.0	
	P6_1514_P6 Loss of Pisgah-Eldordo No.2 230 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	114.8	< 100	153.0	
	P6_4183_P6 Loss of Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	153.0	
	P6_5513_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	113.9	< 100	NotConv	
24085 LUGO 230 24194 lugo 2i 13.8 2 1	P6_1320_P6 Loss of Lugo-Pisgah No.1 230 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	113.7	< 100	< 100	Existing High Desert Power Project RAS and Planned Victor CRAS
	P6_1417_P6 Loss of Pisgah-Eldordo No.1 230 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	114.9	< 100	153.5	
	P6_1513_P6 Loss of Pisgah-Eldordo No.2 230 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	114.9	< 100	153.5	
	P6_4182_P6 Loss of Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	153.5	
	P6_5512_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	114.1	< 100	NotConv	
24086 LUGO 500 24192 lugo 1i 13.8 1 1	P6_1223_P6 Loss of Lugo-Pisgah No.2 230 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	118.6	< 100	163.5	Existing High Desert Power Project RAS and Planned Victor CRAS
	P6_1321_P6 Loss of Lugo-Pisgah No.1 230 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	118.6	< 100	163.5	
	P6_1418_P6 Loss of Pisgah-Eldordo No.1 230 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	119.9	< 100	164.8	
	P6_1514_P6 Loss of Pisgah-Eldordo No.2 230 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	119.9	< 100	164.8	
	P6_4183_P6 Loss of Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	165.2	
	P6_5513_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	119.1	< 100	< 100	
	P6_6511_P6 Loss of Lugo No.2 500/230 kV transformer and Lugo No.3 500/230 kV transformer	P6	N-1-1	< 100	< 100	100.7	< 100	< 100	< 100	< 100	< 100	< 100	
24086 LUGO 500 24194 lugo 2i 13.8 2 1	Base Case	P0	Base Case	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	100.7	Congestion management
	P6_1222_P6 Loss of Lugo-Pisgah No.2 230 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	118.8	< 100	162.2	Existing High Desert Power Project RAS and Planned Victor CRAS
	P6_1320_P6 Loss of Lugo-Pisgah No.1 230 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	118.8	< 100	162.3	
	P6_1417_P6 Loss of Pisgah-Eldordo No.1 230 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	120.0	< 100	163.6	
	P6_1513_P6 Loss of Pisgah-Eldordo No.2 230 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	120.0	< 100	163.6	
	P6_4182_P6 Loss of Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	164.0	
	P6_5512_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	119.3	< 100	< 100	

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				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 Spring OP Sensitivity	
	P6_6476_P6 Loss of Lugo No.1 500/230 kV transformer and Lugo No.3 500/230 kV transformer	P6	N-1-1	< 100	< 100	100.8	< 100	< 100	< 100	< 100	< 100	< 100	
24086 LUGO 500 29258 lugo 3i 13.8 3 1	P6_6475_P6 Loss of Lugo No.1 500/230 kV transformer and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	100.7	< 100	< 100	< 100	< 100	< 100	< 100	Existing High Desert Power Project RAS and Planned Victor CRAS
	PX_1_PX.1 N-2 Loss of Two LUGO 500-230 kV AA Banks	Extreme	Extreme	< 100	< 100	100.7	< 100	< 100	< 100	< 100	< 100	< 100	
24601 VICTOR 230 24085 LUGO 230 1 1	Base Case	P0	Base Case	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	116.5	Congestion management
	P6_1641_P6 Loss of Victor-Lugo No.2 230 kV line and Victor-Lugo No.3 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	130.9	< 100	173.1	Existing High Desert Power Project RAS and Planned Victor CRAS
	P6_1642_P6 Loss of Victor-Lugo No.2 230 kV line and Victor-Lugo No.4 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	130.9	< 100	173.1	
	P6_1672_P6 Loss of Victor-Lugo No.2 230 kV line and Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	118.5	
	P6_1735_P6 Loss of Victor-Lugo No.3 230 kV line and Victor-Lugo No.4 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	130.9	< 100	173.1	
	P6_1765_P6 Loss of Victor-Lugo No.3 230 kV line and Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	118.5	
24601 VICTOR 230 24085 LUGO 230 2 1	Base Case	P0	Base Case	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	116.5	Congestion management
	P6_1547_P6 Loss of Victor-Lugo No.1 230 kV line and Victor-Lugo No.3 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	130.9	< 100	173.1	Existing High Desert Power Project RAS and Planned Victor CRAS
	P6_1548_P6 Loss of Victor-Lugo No.1 230 kV line and Victor-Lugo No.4 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	130.9	< 100	173.1	
	P6_1578_P6 Loss of Victor-Lugo No.1 230 kV line and Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	118.5	
	P6_1735_P6 Loss of Victor-Lugo No.3 230 kV line and Victor-Lugo No.4 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	130.9	< 100	173.1	
	P6_1857_P6 Loss of Victor-Lugo No.4 230 kV line and Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	118.5	
24601 VICTOR 230 24085 LUGO 230 3 1	Base Case	P0	Base Case	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	116.5	Congestion management
	P6_1546_P6 Loss of Victor-Lugo No.1 230 kV line and Victor-Lugo No.2 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	130.9	< 100	173.1	Existing High Desert Power Project RAS and Planned Victor CRAS
	P6_1548_P6 Loss of Victor-Lugo No.1 230 kV line and Victor-Lugo No.4 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	130.9	< 100	173.1	
	P6_1578_P6 Loss of Victor-Lugo No.1 230 kV line and Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	118.5	
	P6_1642_P6 Loss of Victor-Lugo No.2 230 kV line and Victor-Lugo No.4 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	130.9	< 100	173.1	
	P6_1857_P6 Loss of Victor-Lugo No.4 230 kV line and Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	118.5	
24601 VICTOR 230 24085	Base Case	P0	Base Case	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	116.5	Congestion management
	P6_1546_P6 Loss of Victor-Lugo No.1 230 kV line and Victor-Lugo No.2 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	130.9	< 100	173.1	
	P6_1547_P6 Loss of Victor-Lugo No.1 230 kV line and Victor-Lugo No.3 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	130.9	< 100	173.1	

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				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 Spring OP Sensitivity	
LUGO 230 4 1	P6_1578_P6 Loss of Victor-Lugo No.1 230 kV line and Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	118.5	Existing High Desert Power Project RAS and Planned Victor CRAS
	P6_1641_P6 Loss of Victor-Lugo No.2 230 kV line and Victor-Lugo No.3 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	130.9	< 100	173.1	
	P6_1765_P6 Loss of Victor-Lugo No.3 230 kV line and Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	118.5	
24601 VICTOR 230 246020 VICTOR_1i 12.0 1 1	P3_361_P3 Loss of Baldy Mesa 1&2 Units 1-3 and Victor No.2 115/230 kV transformer	P3	G-1/N-1	105.4	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency
	P3_380_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.2 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	103.2	< 100	
	P3_381_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	100.8	< 100	
	P3_388_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.2 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	165.0	124.7	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency for near-term and utilize demand response resources at Victor 115kV after the second contingency for long-term P3 events. Investigating transformer upgrade options along with BESS additions on the 115kV system
	P3_389_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	160.3	121.3	< 100	< 100	< 100	< 100	< 100	
	P6_2071_P6 Loss of Victor-Roadway No.1 115 kV line and Victor No.2 115/230 kV transformer	P6	N-1-1	109.2	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency for near-term and shed load after the second contingency for long-term P6 events.
	P6_2072_P6 Loss of Victor-Roadway No.1 115 kV line and Victor No.3 115/230 kV transformer	P6	N-1-1	106.5	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_2160_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.2 115/230 kV transformer	P6	N-1-1	105.5	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_2355_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.2 115/230 kV transformer	P6	N-1-1	< 100	< 100	165.1	124.7	< 100	< 100	< 100	< 100	< 100	
	P6_2356_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.3 115/230 kV transformer	P6	N-1-1	< 100	< 100	160.4	121.3	< 100	< 100	< 100	< 100	< 100	
	P6_5671_P6 Loss of Victor No.2 115/230 kV transformer and Victor No.3 115/230 kV transformer	P6	N-1-1	166.7	< 100	< 100	< 100	132.0	< 100	117.1	< 100	< 100	
	P6_6613_P6 Loss of Victor No.2 115/230 kV transformer and Victor No.3 115/230 kV transformer	P6	N-1-1	< 100	< 100	NotConv	NotConv	< 100	< 100	< 100	< 100	< 100	
24601 VICTOR 230 246022 VICTOR_2i 12.0 2 1	Base Case	P0	Base Case	< 100	< 100	100.1	< 100	< 100	< 100	< 100	< 100	< 100	System Redispatch
	P3_360_P3 Loss of Baldy Mesa 1&2 Units 1-3 and Victor No.1 115/230 kV transformer	P3	G-1/N-1	107.3	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency
	P3_379_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.1 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	105.3	< 100	
	P3_381_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	104.6	< 100	
	P3_387_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.1 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	167.8	126.9	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency for near-term and utilize demand response resources at Victor 115kV after the second contingency for long-term P3 events. Investigating transformer upgrade options along with BESS additions on the 115kV system
	P3_389_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	166.5	125.9	< 100	< 100	< 100	< 100	< 100	
	P6_2070_P6 Loss of Victor-Roadway No.1 115 kV line and Victor No.1 115/230 kV transformer	P6	N-1-1	111.4	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_2072_P6 Loss of Victor-Roadway No.1 115 kV line and Victor No.3 115/230 kV transformer	P6	N-1-1	110.6	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_2159_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.1 115/230 kV transformer	P6	N-1-1	107.4	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	

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	P6_2354_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.1 115/230 kV transformer	P6	N-1-1	< 100	< 100	167.9	127.0	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency for near-term and shed load after the second contingency for long-term P6 events.
	P6_2356_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.3 115/230 kV transformer	P6	N-1-1	< 100	< 100	166.6	126.0	< 100	< 100	< 100	< 100	< 100	
	P6_5642_P6 Loss of Victor No.1 115/230 kV transformer and Victor No.3 115/230 kV transformer	P6	N-1-1	167.7	< 100	< 100	< 100	133.0	< 100	118.0	< 100	< 100	
	P6_6581_P6 Loss of Victor No.1 115/230 kV transformer and Victor No.3 115/230 kV transformer	P6	N-1-1	< 100	< 100	NotConv	NotConv	< 100	< 100	< 100	< 100	< 100	
24601 VICTOR 230 246024 VICTOR_3i 12.0 3 1	P3_361_P3 Loss of Baldy Mesa 1&2 Units 1-3 and Victor No.2 115/230 kV transformer	P3	G-1/N-1	103.9	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency
	P3_380_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.2 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	101.7	< 100	
	P3_387_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.1 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	159.2	120.4	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency for near-term and utilize demand response resources at Victor 115kV after the second contingency for long-term P3 events. Investigating transformer upgrade options along with BESS additions on the 115kV system
	P3_388_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.2 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	162.6	122.8	< 100	< 100	< 100	< 100	< 100	
	P6_2070_P6 Loss of Victor-Roadway No.1 115 kV line and Victor No.1 115/230 kV transformer	P6	N-1-1	105.7	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency for near-term and shed load after the second contingency for long-term P6 events.
	P6_2071_P6 Loss of Victor-Roadway No.1 115 kV line and Victor No.2 115/230 kV transformer	P6	N-1-1	107.6	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_2160_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.2 115/230 kV transformer	P6	N-1-1	103.9	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_2354_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.1 115/230 kV transformer	P6	N-1-1	< 100	< 100	159.3	120.5	< 100	< 100	< 100	< 100	< 100	
	P6_2355_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.2 115/230 kV transformer	P6	N-1-1	< 100	< 100	162.6	122.9	< 100	< 100	< 100	< 100	< 100	
	P6_5641_P6 Loss of Victor No.1 115/230 kV transformer and Victor No.2 115/230 kV transformer	P6	N-1-1	166.8	< 100	< 100	< 100	131.6	< 100	116.7	< 100	< 100	
	P6_6580_P6 Loss of Victor No.1 115/230 kV transformer and Victor No.2 115/230 kV transformer	P6	N-1-1	< 100	< 100	NotConv	NotConv	< 100	< 100	< 100	< 100	< 100	
24602 VICTOR 115 24607 ROADWAY 115 1 1	Base Case	P0	Base Case	< 100	< 100	< 100	< 100	< 100	< 100	101.3	< 100	< 100	Congestion management
	P6_2191_P6 Loss of Victor-Kramer No.1 115 kV line and Kramer-Victor No.1 230 kV line	P6	N-1-1	108.5	< 100	< 100	< 100	< 100	< 100	135.4	< 100	< 100	Mohave Desert RAS
	P6_2192_P6 Loss of Victor-Kramer No.1 115 kV line and Kramer-Victor No.2 230 kV line	P6	N-1-1	108.5	< 100	< 100	< 100	< 100	< 100	135.4	< 100	< 100	
	P6_2416_P6 Loss of Kramer-Victor No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	111.7	< 100	< 100	
	P6_2501_P6 Loss of Kramer-Victor No.2 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	111.7	< 100	< 100	
24602 VICTOR 115 24702 KRAMER 115 1 1	P6_2014_P6 Loss of Victor-Roadway No.1 115 kV line and Kramer-Victor No.1 230 kV line	P6	N-1-1	107.7	< 100	< 100	< 100	< 100	< 100	139.0	< 100	117.3	Mohave Desert RAS
	P6_2015_P6 Loss of Victor-Roadway No.1 115 kV line and Kramer-Victor No.2 230 kV line	P6	N-1-1	107.7	< 100	< 100	< 100	< 100	< 100	139.0	< 100	117.3	
	P6_2278_P6 Loss of Roadway-Kramer No.1 115 kV line and Kramer-Victor No.1 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	128.1	< 100	122.3	
	P6_2279_P6 Loss of Roadway-Kramer No.1 115 kV line and Kramer-Victor No.2 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	128.1	< 100	122.3	

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				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 Spring OP Sensitivity	
24602 VICTOR 115 246020 VICTOR_1i 12.0 1 1	P3_388_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.2 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	155.1	121.7	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency for near-term and utilize demand response resources at Victor 115kV after the second contingency for long-term P3 events. Investigating transformer upgrade options along with BESS additions on the 115kV system
	P3_389_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	151.0	118.5	< 100	< 100	< 100	< 100	< 100	
	P6_2071_P6 Loss of Victor-Roadway No.1 115 kV line and Victor No.2 115/230 kV transformer	P6	N-1-1	103.4	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency for near-term and shed load after the second contingency for long-term P6 events.
	P6_2072_P6 Loss of Victor-Roadway No.1 115 kV line and Victor No.3 115/230 kV transformer	P6	N-1-1	101.0	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_2355_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.2 115/230 kV transformer	P6	N-1-1	< 100	< 100	155.1	121.7	< 100	< 100	< 100	< 100	< 100	
	P6_2356_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.3 115/230 kV transformer	P6	N-1-1	< 100	< 100	151.0	118.5	< 100	< 100	< 100	< 100	< 100	
	P6_5671_P6 Loss of Victor No.2 115/230 kV transformer and Victor No.3 115/230 kV transformer	P6	N-1-1	142.0	< 100	< 100	< 100	127.5	< 100	101.9	< 100	< 100	
	P6_6613_P6 Loss of Victor No.2 115/230 kV transformer and Victor No.3 115/230 kV transformer	P6	N-1-1	< 100	< 100	NotConv	NotConv	< 100	< 100	< 100	< 100	< 100	
24602 VICTOR 115 246022 VICTOR_2i 12.0 2 1	P3_360_P3 Loss of Baldy Mesa 1&2 Units 1-3 and Victor No.1 115/230 kV transformer	P3	G-1/N-1	101.6	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency
	P3_379_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.1 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	101.7	< 100	
	P3_381_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	101.0	< 100	
	P3_387_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.1 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	158.0	123.9	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency for near-term and utilize demand response resources at Victor 115kV after the second contingency for long-term P3 events. Investigating transformer upgrade options along with BESS additions on the 115kV system
	P3_389_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	156.8	123.0	< 100	< 100	< 100	< 100	< 100	
	P6_2070_P6 Loss of Victor-Roadway No.1 115 kV line and Victor No.1 115/230 kV transformer	P6	N-1-1	105.5	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency for near-term and shed load after the second contingency for long-term P6 events.
	P6_2072_P6 Loss of Victor-Roadway No.1 115 kV line and Victor No.3 115/230 kV transformer	P6	N-1-1	104.9	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_2159_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.1 115/230 kV transformer	P6	N-1-1	101.6	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_2354_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.1 115/230 kV transformer	P6	N-1-1	< 100	< 100	158.0	123.9	< 100	< 100	< 100	< 100	< 100	
	P6_2356_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.3 115/230 kV transformer	P6	N-1-1	< 100	< 100	156.8	123.0	< 100	< 100	< 100	< 100	< 100	
	P6_5642_P6 Loss of Victor No.1 115/230 kV transformer and Victor No.3 115/230 kV transformer	P6	N-1-1	143.6	< 100	< 100	< 100	128.9	< 100	103.1	< 100	< 100	
	P6_6581_P6 Loss of Victor No.1 115/230 kV transformer and Victor No.3 115/230 kV transformer	P6	N-1-1	< 100	< 100	NotConv	NotConv	< 100	< 100	< 100	< 100	< 100	
24602 VICTOR 115 246024	P3_387_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.1 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	149.9	117.6	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency for near-term and utilize demand response resources at Victor 115kV after the second contingency for long-term P3 events. Investigating transformer upgrade options along with BESS additions on the 115kV system
	P3_388_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Victor No.2 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	152.8	119.9	< 100	< 100	< 100	< 100	< 100	
	P6_2070_P6 Loss of Victor-Roadway No.1 115 kV line and Victor No.1 115/230 kV transformer	P6	N-1-1	100.1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_2071_P6 Loss of Victor-Roadway No.1 115 kV line and Victor No.2 115/230 kV transformer	P6	N-1-1	101.9	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	

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				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 Spring OP Sensitivity	
VICTOR_3i 12.0 3 1	P6_2354_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.1 115/230 kV transformer	P6	N-1-1	< 100	< 100	149.9	117.6	< 100	< 100	< 100	< 100	< 100	Energize existing spare transformer after intial contingency for near-term and shed load after the second contingency for long-term P6 events.
	P6_2355_P6 Loss of Roadway-Hamlin No.1 115 kV line and Victor No.2 115/230 kV transformer	P6	N-1-1	< 100	< 100	152.8	119.9	< 100	< 100	< 100	< 100	< 100	
	P6_5641_P6 Loss of Victor No.1 115/230 kV transformer and Victor No.2 115/230 kV transformer	P6	N-1-1	141.4	< 100	< 100	< 100	126.9	< 100	101.4	< 100	< 100	
	P6_6580_P6 Loss of Victor No.1 115/230 kV transformer and Victor No.2 115/230 kV transformer	P6	N-1-1	< 100	< 100	NotConv	NotConv	< 100	< 100	< 100	< 100	< 100	
24607 ROADWAY 115 24702 KRAMER 115 1 1	P3_304_P3 Loss of Baldy Mesa 1&2 Units 1-3 and Kramer-Victor No.1 230 kV line	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	< 100	101.3	< 100	< 100	Mohave Desert RAS
	P3_305_P3 Loss of Baldy Mesa 1&2 Units 1-3 and Kramer-Victor No.2 230 kV line	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	< 100	101.3	< 100	< 100	
	P6_2191_P6 Loss of Victor-Kramer No.1 115 kV line and Kramer-Victor No.1 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	124.5	< 100	123.1	
	P6_2192_P6 Loss of Victor-Kramer No.1 115 kV line and Kramer-Victor No.2 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	124.5	< 100	123.1	
24647 IVANPAH 230 246471 IVNPH 3i 12.0 3 1	P1_115_P1.3 Loss of Ivanpah No.4 115/230 kV transformer	P1	N-1	< 100	< 100	< 100	< 100	< 100	101.5	< 100	< 100	< 100	Ivanpah Area RAS
	P3_1067_P3 Loss of Daggett 1 Unit ID 1 and Ivanpah No.4 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	104.3	< 100	< 100	< 100	
	P3_1577_P3 Loss of Resurgence 1 Unit ID ALL and Ivanpah No.4 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	101.5	< 100	< 100	< 100	
	P3_1702_P3 Loss of Resurgence 2 Unit ID ALL and Ivanpah No.4 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	101.5	< 100	< 100	< 100	
	P3_2192_P3 Loss of Mammoth 1-3 Unit ID ALL and Ivanpah No.4 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	101.5	< 100	< 100	< 100	
	P6_4837_P6 Loss of Ivanpah-Mtpass-Baker No.1 115 kV line and Ivanpah No.4 115/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	102.4	< 100	< 100	< 100	< 100	< 100	
24647 IVANPAH 230 246473 IVNPH 4i 12.0 4 1	P1_114_P1.3 Loss of Ivanpah No.3 115/230 kV transformer	P1	N-1	< 100	< 100	< 100	< 100	< 100	101.5	< 100	< 100	< 100	Ivanpah Area RAS
	P3_1066_P3 Loss of Daggett 1 Unit ID 1 and Ivanpah No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	104.3	< 100	< 100	< 100	
	P3_1576_P3 Loss of Resurgence 1 Unit ID ALL and Ivanpah No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	101.5	< 100	< 100	< 100	
	P3_1701_P3 Loss of Resurgence 2 Unit ID ALL and Ivanpah No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	101.5	< 100	< 100	< 100	
	P3_2191_P3 Loss of Mammoth 1-3 Unit ID ALL and Ivanpah No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	101.5	< 100	< 100	< 100	
	P6_4836_P6 Loss of Ivanpah-Mtpass-Baker No.1 115 kV line and Ivanpah No.3 115/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	102.4	< 100	< 100	< 100	< 100	< 100	
24648 IVANPAH 115 246471 IVNPH 3i 12.0 3 1	P3_1067_P3 Loss of Daggett 1 Unit ID 1 and Ivanpah No.4 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	103.3	< 100	< 100	< 100	Ivanpah Area RAS
	P3_1577_P3 Loss of Resurgence 1 Unit ID ALL and Ivanpah No.4 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	100.5	< 100	< 100	< 100	
	P3_1949_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Ivanpah No.4 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	100.3	< 100	< 100	< 100	
	P3_251_P3 Loss of Hi5Solar All Units and Ivanpah No.4 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	100.3	< 100	< 100	< 100	

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				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 Spring OP Sensitivity	
	P3_921_P3 Loss of Aratina 2 (TOT904) Unit ID ALL and Ivanpah No.4 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	100.4	< 100	< 100	< 100	
	P6_4837_P6 Loss of Ivanpah-Mtpass-Baker No.1 115 kV line and Ivanpah No.4 115/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	101.1	< 100	< 100	< 100	< 100	< 100	
24648 IVANPAH 115 246473 IVNPH 4i 12.0 4 1	P3_1066_P3 Loss of Daggett 1 Unit ID 1 and Ivanpah No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	103.3	< 100	< 100	< 100	Ivanpah Area RAS
	P3_1576_P3 Loss of Resurgence 1 Unit ID ALL and Ivanpah No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	100.6	< 100	< 100	< 100	
	P3_1948_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Ivanpah No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	100.3	< 100	< 100	< 100	
	P3_250_P3 Loss of Hi5Solar All Units and Ivanpah No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	100.3	< 100	< 100	< 100	
	P3_920_P3 Loss of Aratina 2 (TOT904) Unit ID ALL and Ivanpah No.3 115/230 kV transformer	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	100.4	< 100	< 100	< 100	
	P6_4836_P6 Loss of Ivanpah-Mtpass-Baker No.1 115 kV line and Ivanpah No.3 115/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	101.1	< 100	< 100	< 100	< 100	< 100	
24701 KRAMER 230 24601 VICTOR 230 1 1	Base Case	P0	Base Case	< 100	< 100	< 100	< 100	< 100	< 100	126.7	< 100	128.4	Congestion management
	P1_48_P1.2 Loss of Kramer-Victor No.2 230 kV line	P1	N-1	< 100	119.6	< 100	< 100	< 100	< 100	< 100	117.0	< 100	Mohave Desert RAS
	P3_184_P3 Loss of Hi5Solar All Units and Kramer-Victor No.2 230 kV line	P3	G-1/N-1	< 100	119.8	< 100	< 100	< 100	< 100	< 100	117.2	< 100	
	P3_2125_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer-Victor No.2 230 kV line	P3	G-1/N-1	< 100	119.6	< 100	< 100	< 100	< 100	< 100	117.0	< 100	
	P3_2364_P3 Loss of Lundy Unit ID 1-2 and Kramer-Victor No.2 230 kV line	P3	G-1/N-1	< 100	119.6	< 100	< 100	< 100	< 100	< 100	117.0	< 100	
	P3_47_P3 Loss of All HDPP ALL Units and Kramer-Victor No.2 230 kV line	P3	G-1/N-1	< 100	121.2	< 100	< 100	< 100	< 100	< 100	118.6	< 100	
	P6_2015_P6 Loss of Victor-Roadway No.1 115 kV line and Kramer-Victor No.2 230 kV line	P6	N-1-1	143.7	< 100	< 100	< 100	< 100	< 100	195.5	< 100	186.3	
	P6_2192_P6 Loss of Victor-Kramer No.1 115 kV line and Kramer-Victor No.2 230 kV line	P6	N-1-1	138.8	< 100	< 100	< 100	< 100	< 100	187.4	< 100	189.7	
	P6_2279_P6 Loss of Roadway-Kramer No.1 115 kV line and Kramer-Victor No.2 230 kV line	P6	N-1-1	137.7	< 100	< 100	< 100	< 100	< 100	186.4	< 100	190.2	
	P6_2473_P6 Loss of Kramer-Victor No.2 230 kV line and Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	173.1	
	P6_2509_P6 Loss of Kramer-Victor No.2 230 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	130.1	< 100	< 100	< 100	< 100	< 100	173.9	< 100	< 100	
	P6_2510_P6 Loss of Kramer-Victor No.2 230 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	130.8	< 100	< 100	< 100	< 100	< 100	175.0	< 100	172.8	
	Base Case	P0	Base Case	< 100	< 100	< 100	< 100	< 100	< 100	126.7	< 100	128.4	Congestion management
	P1_47_P1.2 Loss of Kramer-Victor No.1 230 kV line	P1	N-1	< 100	119.6	< 100	< 100	< 100	< 100	< 100	117.0	< 100	
	P3_183_P3 Loss of Hi5Solar All Units and Kramer-Victor No.1 230 kV line	P3	G-1/N-1	< 100	119.8	< 100	< 100	< 100	< 100	< 100	117.2	< 100	
	P3_2124_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer-Victor No.1 230 kV line	P3	G-1/N-1	< 100	119.6	< 100	< 100	< 100	< 100	< 100	117.0	< 100	

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				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 Spring OP Sensitivity	
24701 KRAMER 230 24601 VICTOR 230 2 1	P3_2363_P3 Loss of Lundy Unit ID 1-2 and Kramer-Victor No.1 230 kV line	P3	G-1/N-1	< 100	119.6	< 100	< 100	< 100	< 100	< 100	117.0	< 100	
	P3_46_P3 Loss of All HDPP ALL Units and Kramer-Victor No.1 230 kV line	P3	G-1/N-1	< 100	121.2	< 100	< 100	< 100	< 100	< 100	118.6	< 100	
	P6_2014_P6 Loss of Victor-Roadway No.1 115 kV line and Kramer-Victor No.1 230 kV line	P6	N-1-1	143.7	< 100	< 100	< 100	< 100	< 100	195.5	< 100	186.3	Mohave Desert RAS
	P6_2191_P6 Loss of Victor-Kramer No.1 115 kV line and Kramer-Victor No.1 230 kV line	P6	N-1-1	138.8	< 100	< 100	< 100	< 100	< 100	187.4	< 100	189.7	
	P6_2278_P6 Loss of Roadway-Kramer No.1 115 kV line and Kramer-Victor No.1 230 kV line	P6	N-1-1	137.7	< 100	< 100	< 100	< 100	< 100	186.4	< 100	190.2	
	P6_2388_P6 Loss of Kramer-Victor No.1 230 kV line and Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	173.1	
	P6_2424_P6 Loss of Kramer-Victor No.1 230 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	130.1	< 100	< 100	< 100	< 100	< 100	173.9	< 100	< 100	
	P6_2425_P6 Loss of Kramer-Victor No.1 230 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	130.8	< 100	< 100	< 100	< 100	< 100	175.0	< 100	172.8	
24701 KRAMER 230 24717 COLWATER 230 2 1	P3_445_P3 Loss of Lockhart Unit ID ALL and Sandlot-Kramer No.1 230 kV line	P3	G-1/N-1	138.2	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	Mohave Desert RAS
	P6_1937_P6 Loss of Victor-HiDesert No.1 230 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	190.3	< 100	< 100	
	P6_2291_P6 Loss of Roadway-Kramer No.1 115 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	190.0	< 100	155.8	
	P6_2377_P6 Loss of Kramer-Victor No.1 230 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	138.7	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_2462_P6 Loss of Kramer-Victor No.2 230 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	138.7	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_3257_P6 Loss of LUZ LSP-Kramer No.1 230 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	138.7	< 100	< 100	< 100	< 100	< 100	< 100	< 100	155.8	
	P6_3443_P6 Loss of Sandlot-Kramer No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	192.1	< 100	< 100	
	P6_3445_P6 Loss of Sandlot-Kramer No.1 230 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	157.0	
	P6_3446_P6 Loss of Sandlot-Kramer No.1 230 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	159.3	
	P6_3451_P6 Loss of Sandlot-Kramer No.1 230 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	191.3	< 100	< 100	
	P6_3452_P6 Loss of Sandlot-Kramer No.1 230 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	194.0	< 100	< 100	
	P6_3462_P6 Loss of Sandlot-Kramer No.1 230 kV line and Kramer Cap 230 kV shunt	P6	N-1-1	138.5	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_3477_P6 Loss of Sandlot-Kramer No.1 230 kV line and Kramer 220 kV SVD ID ei	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	157.0	
	P6_3825_P6 Loss of Sandlot-Kramer No.1 230 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	< 100	< 100	103.7	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_3873_P6 Loss of Sandlot-Kramer No.1 230 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	< 100	< 100	138.1	< 100	< 100	< 100	< 100	< 100	< 100	
	P3_1381_P3 Loss of Resurgence 1 Unit ID ALL and Kramer No.2 115/230 kV transformer	P3	G-1/N-1	104.4	< 100	< 100	< 100	< 100	< 100	104.3	< 100	< 100	

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				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 Spring OP Sensitivity	
24701 KRAMER 230 24873 KRAMER 1i 12.0 1 1	P6_2425_P6 Loss of Kramer-Victor No.1 230 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	132.9	< 100	< 100	< 100	< 100	< 100	146.3	< 100	< 100	System Redispatch: Increase generation on the 115 kV system (Kramer, Coolwater, Inyokern, Control)
	P6_2510_P6 Loss of Kramer-Victor No.2 230 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	132.9	< 100	< 100	< 100	< 100	< 100	146.3	< 100	< 100	
	P6_2920_P6 Loss of Kramer-Sungen No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	110.7	< 100	< 100	< 100	< 100	< 100	111.8	< 100	< 100	
24701 KRAMER 230 24875 KRAMER 2i 12.0 2 1	P3_1380_P3 Loss of Resurgence 1 Unit ID ALL and Kramer No.1 115/230 kV transformer	P3	G-1/N-1	107.2	< 100	< 100	< 100	< 100	< 100	106.8	< 100	< 100	System Redispatch: Increase generation on the 115 kV system (Kramer, Coolwater, Inyokern, Control)
	P6_2424_P6 Loss of Kramer-Victor No.1 230 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	137.9	< 100	< 100	< 100	< 100	< 100	151.8	< 100	< 100	
	P6_2509_P6 Loss of Kramer-Victor No.2 230 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	137.9	< 100	< 100	< 100	< 100	< 100	151.8	< 100	< 100	
	P6_2919_P6 Loss of Kramer-Sungen No.1 115 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	113.7	< 100	< 100	< 100	< 100	< 100	114.6	< 100	< 100	
24702 KRAMER 115 24716 COLWATER 115 1 1	P6_4412_P6 Loss of Kramer-Accelerate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	102.0	< 100	< 100	< 100	< 100	< 100	System Redispatch after second contingency
24702 KRAMER 115 24873 KRAMER 1i 12.0 1 1	P3_1381_P3 Loss of Resurgence 1 Unit ID ALL and Kramer No.2 115/230 kV transformer	P3	G-1/N-1	107.9	< 100	< 100	< 100	< 100	< 100	108.2	< 100	< 100	System Redispatch: Increase generation on the 115 kV system (Kramer, Coolwater, Inyokern, Control)
	P6_2425_P6 Loss of Kramer-Victor No.1 230 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	134.0	< 100	< 100	< 100	< 100	< 100	150.7	< 100	< 100	
	P6_2510_P6 Loss of Kramer-Victor No.2 230 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	134.0	< 100	< 100	< 100	< 100	< 100	150.7	< 100	< 100	
	P6_2920_P6 Loss of Kramer-Sungen No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	115.1	< 100	< 100	< 100	< 100	< 100	116.8	< 100	< 100	
24702 KRAMER 115 24875 KRAMER 2i 12.0 2 1	P3_1380_P3 Loss of Resurgence 1 Unit ID ALL and Kramer No.1 115/230 kV transformer	P3	G-1/N-1	112.7	< 100	< 100	< 100	< 100	< 100	113.0	< 100	< 100	System Redispatch: Increase generation on the 115 kV system (Kramer, Coolwater, Inyokern, Control)
	P6_2424_P6 Loss of Kramer-Victor No.1 230 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	143.0	< 100	< 100	< 100	< 100	< 100	160.8	< 100	102.6	
	P6_2509_P6 Loss of Kramer-Victor No.2 230 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	143.0	< 100	< 100	< 100	< 100	< 100	160.8	< 100	102.6	
	P6_2919_P6 Loss of Kramer-Sungen No.1 115 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	119.9	< 100	< 100	< 100	< 100	< 100	121.6	< 100	< 100	
24716 COLWATER 115 24765 TAP705 115 1 1	P6_3739_P6 Loss of Kramer-Colwater No.2 230 kV line and Sandlot-Colwater No.1 230 kV line	P6	N-1-1	< 100	< 100	100.1	< 100	< 100	< 100	< 100	< 100	< 100	Planned Kramer CRAS
	P7_2_P7.1 Line KRAMER - COLWATER 230.0 ck 2 Line SANDLOT - COLWATER 230.0 ck 1	P7	DCTL	< 100	< 100	100.1	< 100	< 100	< 100	< 100	< 100	< 100	
24716 COLWATER 115 247161 COLWATER_1i 12.0 1 1	P6_3738_P6 Loss of Kramer-Colwater No.2 230 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	< 100	< 100	NotConv	122.3	< 100	< 100	< 100	< 100	< 100	Planned Kramer CRAS
	P6_3739_P6 Loss of Kramer-Colwater No.2 230 kV line and Sandlot-Colwater No.1 230 kV line	P6	N-1-1	< 100	< 100	117.2	< 100	< 100	< 100	< 100	< 100	< 100	
	P7_2_P7.1 Line KRAMER - COLWATER 230.0 ck 2 Line SANDLOT - COLWATER 230.0 ck 1	P7	DCTL	< 100	< 100	117.2	< 100	< 100	< 100	< 100	< 100	< 100	
24717 COLWATER 230 247161 COLWATER_1i 12.0 1 1	P6_3738_P6 Loss of Kramer-Colwater No.2 230 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	< 100	< 100	NotConv	123.4	< 100	< 100	< 100	< 100	< 100	Planned Kramer CRAS
	P6_3739_P6 Loss of Kramer-Colwater No.2 230 kV line and Sandlot-Colwater No.1 230 kV line	P6	N-1-1	< 100	< 100	119.0	< 100	< 100	< 100	< 100	< 100	< 100	
	P7_2_P7.1 Line KRAMER - COLWATER 230.0 ck 2 Line SANDLOT - COLWATER 230.0 ck 1	P7	DCTL	< 100	< 100	119.0	< 100	< 100	< 100	< 100	< 100	< 100	

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				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 Spring OP Sensitivity	
24722 CONTROL 55.0 24723 CONTROL 115 1 1	P6_5523_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.3 55/115 kV transformer	P6	N-1-1	118.2	< 100	< 100	< 100	< 100	< 100	128.8	< 100	< 100	System Redispatch after second contingency
	P6_6414_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.3 55/115 kV transformer	P6	N-1-1	< 100	< 100	111.1	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_6451_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Control No.3 55/115 kV transformer	P6	N-1-1	< 100	< 100	107.6	< 100	< 100	< 100	< 100	< 100	< 100	
24722 CONTROL 55.0 24723 CONTROL 115 3 1	P6_5522_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.1 55/115 kV transformer	P6	N-1-1	118.2	< 100	< 100	< 100	< 100	< 100	128.8	< 100	< 100	System Redispatch after second contingency
	P6_6413_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.1 55/115 kV transformer	P6	N-1-1	< 100	< 100	111.1	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_6450_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Control No.1 55/115 kV transformer	P6	N-1-1	< 100	< 100	107.6	< 100	< 100	< 100	< 100	< 100	< 100	
24736 LUZ LSP 230 24701 KRAMER 230 1 1	P6_2204_P6 Loss of Victor-Kramer No.1 115 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	102.4	Mohave Desert RAS
	P6_2291_P6 Loss of Roadway-Kramer No.1 115 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	102.5	
	P6_3445_P6 Loss of Sandlot-Kramer No.1 230 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	103.5	
	P6_3446_P6 Loss of Sandlot-Kramer No.1 230 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	104.9	
	P6_3477_P6 Loss of Sandlot-Kramer No.1 230 kV line and Kramer 220 kV SVD ID ei	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	103.5	
24759 TORTILLA 115 24765 TAP705 115 1 1	P6_3739_P6 Loss of Kramer-Colwater No.2 230 kV line and Sandlot-Colwater No.1 230 kV line	P6	N-1-1	< 100	< 100	108.7	< 100	< 100	< 100	< 100	< 100	< 100	Planned Kramer CRAS
	P7_2_P7.1 Line KRAMER - COLWATER 230.0 ck 2 Line SANDLOT - COLWATER 230.0 ck 1	P7	N-1	< 100	< 100	108.7	< 100	< 100	< 100	< 100	< 100	< 100	
24795 SANDLOT 230 24701 KRAMER 230 1 1	Base Case	P0	Base Case	< 100	< 100	< 100	< 100	< 100	< 100	111.6	< 100	< 100	Not ISO controlled prior to TPP approved project - New Coolwater A 230/115 kV Bank (April 2029)
	P4_7_Kramer- Victor No. 2 230 kV and Kramer -Coolwater 230 kV - SLG 15 cycle fault at Kramer 220	P4	Stuck Breaker	135.5	< 100	< 100	< 100	< 100	< 100	169.4	< 100	148.3	Planned Kramer CRAS
	P6_1936_P6 Loss of Victor-HiDesert No.1 230 kV line and Kramer-Colwater No.2 230 kV line	P6	N-1-1	135.4	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_2376_P6 Loss of Kramer-Victor No.1 230 kV line and Kramer-Colwater No.2 230 kV line	P6	N-1-1	135.5	< 100	< 100	< 100	< 100	< 100	169.4	< 100	148.3	
	P6_2461_P6 Loss of Kramer-Victor No.2 230 kV line and Kramer-Colwater No.2 230 kV line	P6	N-1-1	135.5	< 100	< 100	< 100	< 100	< 100	169.4	< 100	148.3	
	P6_3373_P6 Loss of Kramer-Colwater No.2 230 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	145.8	
	P6_3379_P6 Loss of Kramer-Colwater No.2 230 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	168.0	< 100	< 100	
	P6_3389_P6 Loss of Kramer-Colwater No.2 230 kV line and Kramer Cap 230 kV shunt	P6	N-1-1	135.5	< 100	< 100	< 100	< 100	< 100	168.2	< 100	< 100	
	P6_3404_P6 Loss of Kramer-Colwater No.2 230 kV line and Kramer 220 kV SVD ID ei	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	145.9	
	P6_3743_P6 Loss of Kramer-Colwater No.2 230 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	< 100	< 100	104.2	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_3744_P6 Loss of Kramer-Colwater No.2 230 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	< 100	< 100	112.2	< 100	< 100	< 100	< 100	< 100	< 100	

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				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 Spring OP Sensitivity	
	P6_3748_P6 Loss of Kramer-Colwater No.2 230 kV line and Colwater-Tiefort No.1 115 kV line	P6	N-1-1	< 100	< 100	102.9	< 100	< 100	< 100	< 100	< 100	< 100	
	P6_3792_P6 Loss of Kramer-Colwater No.2 230 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	< 100	< 100	134.4	< 100	< 100	< 100	< 100	< 100	< 100	
240071 SILVR_SPRNGS 230 24717 COLWATER 230 1 1	Base Case	P0	Base Case	< 100	< 100	< 100	< 100	< 100	< 100	101.7	< 100	< 100	Congestion management
	P6_3443_P6 Loss of Sandlot-Kramer No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	100.6	< 100	< 100	Planned Kramer CRAS
	P6_3451_P6 Loss of Sandlot-Kramer No.1 230 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	100.3	< 100	< 100	
	P6_3452_P6 Loss of Sandlot-Kramer No.1 230 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	< 100	101.4	< 100	< 100	
240357 HIDDNSPRINGS 115 24716 COLWATER 115 1 1	P6_4412_P6 Loss of Kramer-Accelerate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	< 100	< 100	< 100	106.4	< 100	< 100	< 100	< 100	< 100	System Redispatch withTortilla Capacitors switched on.

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
241006 ACCELERATE 115 kV	P1_66_P1.2 Loss of Coolwater-Segs2-Tortilla No.1 115 kV line	P1	N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P2_5_P2.1 Line TORTILLA 115.0 to TAP705 115.0 Circuit 1	P2	Line Section w/o Fault	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1147_P3 Loss of Daggett2 Unit ID ALL and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1275_P3 Loss of Daggett3 Unit ID ALL and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1561_P3 Loss of Resurgence 1 Unit ID ALL and Colwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2196_P3 Loss of Rush Unit ID 1-2 and Colwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_872_P3 Loss of Aratina 2 (TOT904) Unit ID ALL and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_162_P6 Loss of Oxbow (Dixie Valley) Project and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3237_P6 Loss of Kramer-Sungen No.1 115 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3324_P6 Loss of Kramer-Twinkle No.1 230 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3825_P6 Loss of Sandlot-Kramer No.1 230 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4336_P6 Loss of Colwater-Segs2-Tortilla No.1 115 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4337_P6 Loss of Colwater-Segs2-Tortilla No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4350_P6 Loss of Colwater-Segs2-Tortilla No.1 115 kV line and Kramer Cap 115 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4412_P6 Loss of Kramer-Accelerate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.76	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24602 VICTOR 115 kV	P6_6580_P6 Loss of Victor No.1 115/230 kV transformer and Victor No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	Energize existing spare transformer after intial contingency and system adjustments after first contingency mitigates the issue
	P6_6581_P6 Loss of Victor No.1 115/230 kV transformer and Victor No.3 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.90	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	Energize existing spare transformer after intial contingency and system adjustments after first contingency mitigates the issue
	P6_6613_P6 Loss of Victor No.2 115/230 kV transformer and Victor No.3 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.80	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	Energize existing spare transformer after intial contingency and system adjustments after first contingency mitigates the issue
24607 ROADWAY 115 kV	P6_6580_P6 Loss of Victor No.1 115/230 kV transformer and Victor No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.80	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	Energize existing spare transformer after intial contingency and system adjustments after first contingency mitigates the issue
	P6_6581_P6 Loss of Victor No.1 115/230 kV transformer and Victor No.3 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.90	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	Energize existing spare transformer after intial contingency and system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_6613_P6 Loss of Victor No.2 115/230 kV transformer and Victor No.3 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.80	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	Energize existing spare transformer after intial contingency and system adjustments after first contingency mitigates the issue
24702 KRAMER 115 kV	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24716 COLWATER 115 kV	P3_1099_P3 Loss of Daggett 3 ALL Units and Kramer-Colwater No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_2211_P6 Loss of Victor-Kramer No.1 115 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_2956_P6 Loss of Kramer-Twinkle No.1 230 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_3691_P6 Loss of Coolwater-Silver_Springs No.1 230 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_3760_P6 Loss of Kramer-Colwater No.1 115 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.73	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3761_P6 Loss of Kramer-Colwater No.1 115 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.61	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.15	system adjustments after first contingency mitigates the issue
	P6_3765_P6 Loss of Kramer-Colwater No.1 115 kV line and Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3928_P6 Loss of Kramer-Tortilla No.1 115 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_3960_P6 Loss of Kramer-Tortilla No.1 115 kV line and Kramer 220 kV SVD ID ei	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_42_P6 Loss of Mojave Solar Projects and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_4412_P6 Loss of Kramer-Accelerate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	Base Case	P0	Base Case	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P2_6_P2.1 Line TAP704 115.0 to CONTROL 115.0 Circuit 1	P2	Line Section w/o Fault	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_131_P3 Loss of All HDPP ALL Units and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1766_P3.1 Loss of Mammoth 1-3 Unit ID ALL and Lundy Unit ID 1-2	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P3_1783_P3 Loss of Mammoth 1-3 Unit ID ALL and Victor-Lugo No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1796_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer-Calcity No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1814_P3 Loss of Mammoth 1-3 Unit ID ALL and Colwater-Tiefort No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1824_P3 Loss of Mammoth 1-3 Unit ID ALL and Downs-Searles No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_1878_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer 220 kV SVD ID ei	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.07	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2209_P3 Loss of Mammoth 1-3 Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2287_P3 Loss of Rush Unit ID 1-2 and Control-Casa Diablo-Shrwn No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2329_P3 Loss of Rush Unit ID 1-2 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_539_P3 Loss of Lockhart Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24723 CONTROL 115 kV	P6_230_P6 Loss of Oxbow (Dixie Valley) Project and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_232_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3209_P6 Loss of BLM West-Kramer No.1 230 kV line and Control-Casa Diablo-Shrwn No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_322_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_4978_P6 Loss of Casa Diablo-Control No.1 115 kV line and Control-Casa Diablo-Shrwn No.1 115 kV line	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.11	system adjustments after first contingency mitigates the issue
	P6_5004_P6 Loss of Casa Diablo-Control No.1 115 kV line and Inyo No.1 115/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5015_P6 Loss of Casa Diablo-Control No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5017_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.10	system adjustments after first contingency mitigates the issue
	P6_5858_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_5908_P6 Loss of Inyo No.1 115/115 kV transformer and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_6062_P6 Loss of Inyo Reactor 220 kV shunt and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6070_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.10	system adjustments after first contingency mitigates the issue
	P6_7097_P6 Loss of Inyo Reactor 220 kV shunt and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7105_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7114_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_92_P6 Loss of Mojave Solar Projects and Inyo PS No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	Base Case	P0	Base Case	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P2_6_P2.1 Line TAP704 115.0 to CONTROL 115.0 Circuit 1	P2	Line Section w/o Fault	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_131_P3 Loss of All HDPP ALL Units and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1766_P3.1 Loss of Mammoth 1-3 Unit ID ALL and Lundy Unit ID 1-2	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_1783_P3 Loss of Mammoth 1-3 Unit ID ALL and Victor-Lugo No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1784_P3 Loss of Mammoth 1-3 Unit ID ALL and Victor-Lugo No.2 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1796_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer-Calcity No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1814_P3 Loss of Mammoth 1-3 Unit ID ALL and Colwater-Tiefort No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1824_P3 Loss of Mammoth 1-3 Unit ID ALL and Downs-Searles No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_1878_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer 220 kV SVD ID ei	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.07	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2209_P3 Loss of Mammoth 1-3 Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24724 OXBOW B 115 kV	P3_2287_P3 Loss of Rush Unit ID 1-2 and Control-Casa Diablo-Shrwn No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2329_P3 Loss of Rush Unit ID 1-2 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_539_P3 Loss of Lockhart Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_230_P6 Loss of Oxbow (Dixie Valley) Project and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_232_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3209_P6 Loss of BLM West-Kramer No.1 230 kV line and Control-Casa Diablo-Shrwn No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_322_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_4978_P6 Loss of Casa Diablo-Control No.1 115 kV line and Control-Casa Diablo-Shrwn No.1 115 kV line	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.11	system adjustments after first contingency mitigates the issue
	P6_5004_P6 Loss of Casa Diablo-Control No.1 115 kV line and Inyo No.1 115/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5015_P6 Loss of Casa Diablo-Control No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5017_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.10	system adjustments after first contingency mitigates the issue
	P6_5858_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5908_P6 Loss of Inyo No.1 115/115 kV transformer and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_6062_P6 Loss of Inyo Reactor 220 kV shunt and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6070_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.10	system adjustments after first contingency mitigates the issue
	P6_7097_P6 Loss of Inyo Reactor 220 kV shunt and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7105_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7114_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_92_P6 Loss of Mojave Solar Projects and Inyo PS No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_1872_P3 Loss of Mammoth 1-3 Unit ID ALL and Casa Diablo-Rush line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24725 CSA DIAB 115 kV	P3_2168_P3 Loss of Mammoth 1-3 Unit ID ALL and Casa Diablo-Rush No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2207_P3 Loss of Mammoth 1-3 Unit ID ALL and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2209_P3 Loss of Mammoth 1-3 Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2210_P3 Loss of Mammoth 1-3 Unit ID ALL and Casa Diablo-Rush line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2330_P3 Loss of Rush Unit ID 1-2 and Casa Diablo-Rush line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5108_P6 Loss of Casa Diablo-Rush No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_6063_P6 Loss of Inyo Reactor 220 kV shunt and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_6071_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_7098_P6 Loss of Inyo Reactor 220 kV shunt and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7106_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7113_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7114_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P1_49_P1.2 Loss of Kramer-Holgate No.1 115 kV line	P1	N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1001_P3 Loss of Daggett 1 Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1130_P3 Loss of Daggett2 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1258_P3 Loss of Daggett3 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1322_P3 Loss of Resurgence 1 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1385_P3 Loss of Colosseum ALL Unit ID 1-3 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1511_P3 Loss of Resurgence 1 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1544_P3 Loss of Resurgence 1 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24727 HOLGATE 115 kV	P3_1760_P3 Loss of Navy1 Project Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1883_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2005_P3 Loss of Casa Diablo 4 Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2246_P3 Loss of Rush Unit ID 1-2 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2365_P3 Loss of Lundy Unit ID 1-2 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2831_P3 Loss of Bishop Creek 5 Unit ID 1-2 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_321_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_456_P3 Loss of Lockhart Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_48_P3 Loss of All HDPP ALL Units and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_590_P3 Loss of BLM Facility Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_723_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2536_P6 Loss of Kramer-Holgate No.1 115 kV line and Holgate-Southbase-Edwards No.1 115 kV line	P6	N-1-1	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2539_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Sungen No.1 115 kV line	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2550_P6 Loss of Kramer-Holgate No.1 115 kV line and Coolwater-Silver_Springs No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2594_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_26_P6 Loss of Mojave Solar Projects and Kramer-Holgate No.1 115 kV line	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2863_P6 Loss of Kramer-Holgate No.1 115 kV line and Holgate-Southbase-Edwards No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.10	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2866_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Sungen No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2869_P6 Loss of Kramer-Holgate No.1 115 kV line and Holgate-Borax No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2871_P6 Loss of Kramer-Holgate No.1 115 kV line and LUZ LSP-Kramer No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_2873_P6 Loss of Kramer-Holgate No.1 115 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2879_P6 Loss of Kramer-Holgate No.1 115 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2886_P6 Loss of Kramer-Holgate No.1 115 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2892_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Inyokern No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2893_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Inyokern-Randsburg No.3 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2916_P6 Loss of Kramer-Holgate No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2917_P6 Loss of Kramer-Holgate No.1 115 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2926_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2927_P6 Loss of Kramer-Holgate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2939_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer Cap 115 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2941_P6 Loss of Kramer-Holgate No.1 115 kV line and Tortilla Cap 115 kV shunt (b1)	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	Base Case	P0	Base Case	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_131_P3 Loss of All HDPP ALL Units and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1792_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer-Victor No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1795_P3 Loss of Mammoth 1-3 Unit ID ALL and Holgate-Southbase-Edwards No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_1811_P3 Loss of Mammoth 1-3 Unit ID ALL and Colwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1815_P3 Loss of Mammoth 1-3 Unit ID ALL and Hidden Springs-Colwater 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24728 INYO 115 kV	P3_1818_P3 Loss of Mammoth 1-3 Unit ID ALL and Ivanpah-Eldordo2 No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1819_P3 Loss of Mammoth 1-3 Unit ID ALL and Ivanpah-Primm No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1849_P3 Loss of Mammoth 1-3 Unit ID ALL and Victor No.2 115/230 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.07	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2209_P3 Loss of Mammoth 1-3 Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2287_P3 Loss of Rush Unit ID 1-2 and Control-Casa Diablo-Shrwn No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2329_P3 Loss of Rush Unit ID 1-2 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_52_P3 Loss of All HDPP All Units and Kramer-Twinkle No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_539_P3 Loss of Lockhart Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_933_P3.1 Loss of Daggett 2 ALL Units and Rush Unit ID 1-2	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_230_P6 Loss of Oxbow (Dixie Valley) Project and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_232_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_293_P6 Loss of Oxbow (Dixie Valley) Project and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.89	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_322_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_4978_P6 Loss of Casa Diablo-Control No.1 115 kV line and Control-Casa Diablo-Shrwn No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	system adjustments after first contingency mitigates the issue
	P6_5015_P6 Loss of Casa Diablo-Control No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5017_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.10	system adjustments after first contingency mitigates the issue
	P6_5430_P6 Loss of Control-Inyo No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5858_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_5908_P6 Loss of Inyo No.1 115/115 kV transformer and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_6062_P6 Loss of Inyo Reactor 220 kV shunt and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6070_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.10	system adjustments after first contingency mitigates the issue
	P6_6311_P6 Loss of Control-Inyo No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.12	1.12	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7105_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7114_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_129_P3 Loss of All HDPP ALL Units and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1339_P3 Loss of Daggett3 Unit ID ALL and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1813_P3 Loss of Navy1 Project Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.90	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1936_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.90	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.89	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2058_P3 Loss of Casa Diablo 4 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.89	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2086_P3 Loss of Casa Diablo 4 Unit ID 1 and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2180_P3 Loss of Poole Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.83	system adjustments after first contingency mitigates the issue
	P3_2207_P3 Loss of Mammoth 1-3 Unit ID ALL and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2327_P3 Loss of Rush Unit ID 1-2 and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2418_P3 Loss of Lundy Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.90	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2653_P3 Loss of Bishop Creek 2 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.89	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2681_P3 Loss of Bishop Creek 2 Unit ID 1 and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2769_P3 Loss of Bishop Creek 4 Unit ID 1-5 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.89	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24730 INYO PS 115 kV	P3_2884_P3 Loss of Bishop Creek 5 Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.90	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_537_P3 Loss of Lockhart Unit ID ALL and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_643_P3 Loss of BLM Facility Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.90	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_725_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and Control-Casa Diablo-Shrwn No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P3_804_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2416_P6 Loss of Kramer-Victor No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.89	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2501_P6 Loss of Kramer-Victor No.2 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.89	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_293_P6 Loss of Oxbow (Dixie Valley) Project and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.80	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4846_P6 Loss of BishopCreek34-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4990_P6 Loss of Casa Diablo-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.87	system adjustments after first contingency mitigates the issue
	P6_4991_P6 Loss of Casa Diablo-Control No.1 115 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5015_P6 Loss of Casa Diablo-Control No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_5081_P6 Loss of Casa Diablo-Rush No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.87	system adjustments after first contingency mitigates the issue
	P6_5251_P6 Loss of BishopCreek56-Control No.1 55 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5430_P6 Loss of Control-Inyo No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_5522_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.1 55/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5523_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.3 55/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5538_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.87	system adjustments after first contingency mitigates the issue
	P6_5562_P6 Loss of Control-Haiwee-Inyokern No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.90	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5569_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_5570_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.89	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.89	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5617_P6 Loss of Control-Coso-Haiwee-Inyokern No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.90	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5856_P6 Loss of Casa Diablo-Control No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5906_P6 Loss of Inyo No.1 115/115 kV transformer and Inyo Reactor 220 kV shunt	P6	N-1-1	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_6061_P6 Loss of Inyo Reactor 220 kV shunt and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_6062_P6 Loss of Inyo Reactor 220 kV shunt and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_6311_P6 Loss of Control-Inyo No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.12	1.12	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6400_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6900_P6 Loss of Inyo No.1 115/115 kV transformer and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.12	1.12	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7096_P6 Loss of Inyo Reactor 220 kV shunt and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7097_P6 Loss of Inyo Reactor 220 kV shunt and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24731 INYOKERN 115 kV	P3_1287_P3 Loss of Daggett3 Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1912_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1913_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Inyokern-Randsburg No.3 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2034_P3 Loss of Casa Diablo 4 Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2155_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2275_P3 Loss of Rush Unit ID 1-2 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2512_P3 Loss of Poole Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_350_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_485_P3 Loss of Lockhart Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P3_884_P3 Loss of Aratina 2 (TOT904) Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4395_P6 Loss of Kramer-Inyokern No.1 115 kV line and Kramer-Inyokern-Randsburg No.3 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24749 SEARLES 115 kV	P3_1033_P3 Loss of Daggett 1 Unit ID 1 and Inyokern-Downs No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1912_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1915_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Inyokern-Downs No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2037_P3 Loss of Casa Diablo 4 Unit ID 1 and Inyokern-Downs No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2278_P3 Loss of Rush Unit ID 1-2 and Inyokern-Downs No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2515_P3 Loss of Poole Unit ID 1 and Inyokern-Downs No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24750 SEGS2 115 kV	P3_1099_P3 Loss of Daggett 3 ALL Units and Kramer-Colwater No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_2956_P6 Loss of Kramer-Twinkle No.1 230 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_3409_P6 Loss of Sandlot-Kramer No.1 230 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_3411_P6 Loss of Sandlot-Kramer No.1 230 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_3691_P6 Loss of Coolwater-Silver_Springs No.1 230 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_3761_P6 Loss of Kramer-Colwater No.1 115 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.61	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.15	system adjustments after first contingency mitigates the issue
	P6_3928_P6 Loss of Kramer-Tortilla No.1 115 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_3929_P6 Loss of Kramer-Tortilla No.1 115 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_3960_P6 Loss of Kramer-Tortilla No.1 115 kV line and Kramer 220 kV SVD ID ei	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_4189_P6 Loss of Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_42_P6 Loss of Mojave Solar Projects and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_4412_P6 Loss of Kramer-Accelerate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24753 SUNGEN 115 kV	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1018_P3 Loss of Daggett 1 Unit ID 1 and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1101_P3 Loss of Daggett 3 ALL Units and Kramer-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P3_1147_P3 Loss of Daggett2 Unit ID ALL and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1275_P3 Loss of Daggett3 Unit ID ALL and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1528_P3 Loss of Resurgence 1 Unit ID ALL and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1561_P3 Loss of Resurgence 1 Unit ID ALL and Colwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1777_P3 Loss of Navy1 Project Unit ID ALL and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1900_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2196_P3 Loss of Rush Unit ID 1-2 and Colwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2263_P3 Loss of Rush Unit ID 1-2 and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_338_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24759 TORTILLA 115 kV	P3_473_P3 Loss of Lockhart Unit ID ALL and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_607_P3 Loss of BLM Facility Unit ID ALL and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_65_P3 Loss of All HDPP ALL Units and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_740_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_872_P3 Loss of Aratina 2 (TOT904) Unit ID ALL and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_162_P6 Loss of Oxbow (Dixie Valley) Project and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2958_P6 Loss of Kramer-Twinkle No.1 230 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_3237_P6 Loss of Kramer-Sungen No.1 115 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3324_P6 Loss of Kramer-Twinkle No.1 230 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3693_P6 Loss of Coolwater-Silver_Springs No.1 230 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_3761_P6 Loss of Kramer-Colwater No.1 115 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.61	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.16	system adjustments after first contingency mitigates the issue
	P6_3825_P6 Loss of Sandlot-Kramer No.1 230 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3898_P6 Loss of Kramer-Tortilla No.1 115 kV line and Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4336_P6 Loss of Colwater-Segs2-Tortilla No.1 115 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4337_P6 Loss of Colwater-Segs2-Tortilla No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4350_P6 Loss of Colwater-Segs2-Tortilla No.1 115 kV line and Kramer Cap 115 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_44_P6 Loss of Mojave Solar Projects and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_4412_P6 Loss of Kramer-Accelerate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.80	0.76	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24761 TAP701 115 kV	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P1_49_P1.2 Loss of Kramer-Holgate No.1 115 kV line	P1	N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1001_P3 Loss of Daggett 1 Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1130_P3 Loss of Daggett2 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1258_P3 Loss of Daggett3 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1322_P3 Loss of Resurgence 1 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1385_P3 Loss of Colosseum ALL Unit ID 1-3 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1511_P3 Loss of Resurgence 1 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1544_P3 Loss of Resurgence 1 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1760_P3 Loss of Navy1 Project Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1883_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2005_P3 Loss of Casa Diablo 4 Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2246_P3 Loss of Rush Unit ID 1-2 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2365_P3 Loss of Lundy Unit ID 1-2 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2831_P3 Loss of Bishop Creek 5 Unit ID 1-2 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_321_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_456_P3 Loss of Lockhart Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_48_P3 Loss of All HDPP ALL Units and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_590_P3 Loss of BLM Facility Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24762 TAP481 115 kV	P3_723_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2539_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Sungen No.1 115 kV line	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2550_P6 Loss of Kramer-Holgate No.1 115 kV line and Coolwater-Silver_Springs No.1 230 kV line	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2594_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_26_P6 Loss of Mojave Solar Projects and Kramer-Holgate No.1 115 kV line	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2866_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Sungen No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2869_P6 Loss of Kramer-Holgate No.1 115 kV line and Holgate-Borax No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2871_P6 Loss of Kramer-Holgate No.1 115 kV line and LUZ LSP-Kramer No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2873_P6 Loss of Kramer-Holgate No.1 115 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2879_P6 Loss of Kramer-Holgate No.1 115 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2886_P6 Loss of Kramer-Holgate No.1 115 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2892_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Inyokern No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2893_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Inyokern-Randsburg No.3 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2916_P6 Loss of Kramer-Holgate No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2925_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2926_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2927_P6 Loss of Kramer-Holgate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2938_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer Reactor 230 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2939_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer Cap 115 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2941_P6 Loss of Kramer-Holgate No.1 115 kV line and Tortilla Cap 115 kV shunt (b1)	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_3136_P6 Loss of Calcity-Edwards-Holgate No.1 115 kV line and Kramer-Sungen No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_131_P3 Loss of All HDPP ALL Units and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1759_P3 Loss of Casa Diablo 4 Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2098_P3 Loss of Lundy Unit ID 1-2 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2168_P3 Loss of Mammoth 1-3 Unit ID ALL and Casa Diablo-Rush No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2194_P3 Loss of Poole Unit ID 1 and Inyo No.1 115/115 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P3_2209_P3 Loss of Mammoth 1-3 Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2210_P3 Loss of Mammoth 1-3 Unit ID ALL and Casa Diablo-Rush line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2212_P3 Loss of Mammoth 1-3 Unit ID ALL and Control-TAP704 line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_539_P3 Loss of Lockhart Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2095_P6 Loss of Victor-Roadway No.1 115 kV line and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_232_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24764 TAP704 115 kV	P6_322_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P6_4992_P6 Loss of Casa Diablo-Control No.1 115 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_5248_P6 Loss of BishopCreek56-Control No.1 55 kV line and Control-Inyo No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5869_P6 Loss of Control No.1 55/115 kV transformer and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_5890_P6 Loss of Control No.3 55/115 kV transformer and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_5957_P6 Loss of Casa Diablo-Rush No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6062_P6 Loss of Inyo Reactor 220 kV shunt and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6063_P6 Loss of Inyo Reactor 220 kV shunt and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6070_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P6_6071_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P6_6078_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P6_7105_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7106_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7113_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24765 TAP705 115 kV	P3_1099_P3 Loss of Daggett 3 ALL Units and Kramer-Colwater No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_2956_P6 Loss of Kramer-Twinkle No.1 230 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_3409_P6 Loss of Sandlot-Kramer No.1 230 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_3691_P6 Loss of Coolwater-Silver_Springs No.1 230 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_3761_P6 Loss of Kramer-Colwater No.1 115 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.61	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.15	system adjustments after first contingency mitigates the issue
	P6_3765_P6 Loss of Kramer-Colwater No.1 115 kV line and Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3928_P6 Loss of Kramer-Tortilla No.1 115 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_3960_P6 Loss of Kramer-Tortilla No.1 115 kV line and Kramer 220 kV SVD ID ei	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_42_P6 Loss of Mojave Solar Projects and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_4412_P6 Loss of Kramer-Accelerate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24768 RANDSBRG 115 kV	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P1_49_P1.2 Loss of Kramer-Holgate No.1 115 kV line	P1	N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1001_P3 Loss of Daggett 1 Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1130_P3 Loss of Daggett2 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1258_P3 Loss of Daggett3 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1322_P3 Loss of Resurgence 1 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1385_P3 Loss of Colosseum ALL Unit ID 1-3 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1511_P3 Loss of Resurgence 1 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1544_P3 Loss of Resurgence 1 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1760_P3 Loss of Navy1 Project Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1883_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2005_P3 Loss of Casa Diablo 4 Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2246_P3 Loss of Rush Unit ID 1-2 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2365_P3 Loss of Lundy Unit ID 1-2 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2831_P3 Loss of Bishop Creek 5 Unit ID 1-2 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_321_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_456_P3 Loss of Lockhart Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24769 EDWARDS 115 kV	P3_48_P3 Loss of All HDPP ALL Units and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_590_P3 Loss of BLM Facility Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_723_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2536_P6 Loss of Kramer-Holgate No.1 115 kV line and Holgate-Southbase-Edwards No.1 115 kV line	P6	N-1-1	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2539_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Sungen No.1 115 kV line	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2550_P6 Loss of Kramer-Holgate No.1 115 kV line and Coolwater-Silver_Springs No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2551_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2594_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_26_P6 Loss of Mojave Solar Projects and Kramer-Holgate No.1 115 kV line	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2863_P6 Loss of Kramer-Holgate No.1 115 kV line and Holgate-Southbase-Edwards No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.10	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2866_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Sungen No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2869_P6 Loss of Kramer-Holgate No.1 115 kV line and Holgate-Borax No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2873_P6 Loss of Kramer-Holgate No.1 115 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2879_P6 Loss of Kramer-Holgate No.1 115 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2886_P6 Loss of Kramer-Holgate No.1 115 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2892_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Inyokern No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2893_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Inyokern-Randsburg No.3 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2916_P6 Loss of Kramer-Holgate No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2926_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2927_P6 Loss of Kramer-Holgate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_2939_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer Cap 115 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2941_P6 Loss of Kramer-Holgate No.1 115 kV line and Tortilla Cap 115 kV shunt (b1)	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3136_P6 Loss of Calcity-Edwards-Holgate No.1 115 kV line and Kramer-Sungen No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1001_P3 Loss of Daggett 1 Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1130_P3 Loss of Daggett2 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1258_P3 Loss of Daggett3 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1385_P3 Loss of Colosseum ALL Unit ID 1-3 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1511_P3 Loss of Resurgence 1 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1544_P3 Loss of Resurgence 1 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1883_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2005_P3 Loss of Casa Diablo 4 Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2246_P3 Loss of Rush Unit ID 1-2 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_321_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_456_P3 Loss of Lockhart Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_590_P3 Loss of BLM Facility Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_723_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24770 SOUTHBAS 115 kV	P6_2539_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Sungen No.1 115 kV line	P6	N-1-1	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2594_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_2866_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Sungen No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2869_P6 Loss of Kramer-Holgate No.1 115 kV line and Holgate-Borax No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2871_P6 Loss of Kramer-Holgate No.1 115 kV line and LUZ LSP-Kramer No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2886_P6 Loss of Kramer-Holgate No.1 115 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2916_P6 Loss of Kramer-Holgate No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2925_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2926_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2938_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer Reactor 230 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2941_P6 Loss of Kramer-Holgate No.1 115 kV line and Tortilla Cap 115 kV shunt (b1)	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24771 GALE 115 kV	P3_1099_P3 Loss of Daggett 3 ALL Units and Kramer-Colwater No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_2211_P6 Loss of Victor-Kramer No.1 115 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_2956_P6 Loss of Kramer-Twinkle No.1 230 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_3691_P6 Loss of Coolwater-Silver_Springs No.1 230 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_3760_P6 Loss of Kramer-Colwater No.1 115 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.73	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3761_P6 Loss of Kramer-Colwater No.1 115 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.61	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.15	system adjustments after first contingency mitigates the issue
	P6_3765_P6 Loss of Kramer-Colwater No.1 115 kV line and Colwater-DunnSiding-Baker-MtPass-Ivanpah No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3928_P6 Loss of Kramer-Tortilla No.1 115 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_3960_P6 Loss of Kramer-Tortilla No.1 115 kV line and Kramer 220 kV SVD ID ei	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_42_P6 Loss of Mojave Solar Projects and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_4412_P6 Loss of Kramer-Accelerate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24772 SHERWIN 115 kV	P3_131_P3 Loss of All HDPP ALL Units and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1759_P3 Loss of Casa Diablo 4 Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2098_P3 Loss of Lundy Unit ID 1-2 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2168_P3 Loss of Mammoth 1-3 Unit ID ALL and Casa Diablo-Rush No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2194_P3 Loss of Poole Unit ID 1 and Inyo No.1 115/115 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P3_2209_P3 Loss of Mammoth 1-3 Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2210_P3 Loss of Mammoth 1-3 Unit ID ALL and Casa Diablo-Rush line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2212_P3 Loss of Mammoth 1-3 Unit ID ALL and Control-TAP704 line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_539_P3 Loss of Lockhart Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2095_P6 Loss of Victor-Roadway No.1 115 kV line and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_232_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_322_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P6_4992_P6 Loss of Casa Diablo-Control No.1 115 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_5248_P6 Loss of BishopCreek56-Control No.1 55 kV line and Control-Inyo No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_5869_P6 Loss of Control No.1 55/115 kV transformer and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_5890_P6 Loss of Control No.3 55/115 kV transformer and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_5957_P6 Loss of Casa Diablo-Rush No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6062_P6 Loss of Inyo Reactor 220 kV shunt and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6063_P6 Loss of Inyo Reactor 220 kV shunt and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6070_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P6_6071_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P6_6078_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P6_7105_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7106_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7113_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24773 TIEFORT 115 kV	P3_1099_P3 Loss of Daggett 3 ALL Units and Kramer-Colwater No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_2211_P6 Loss of Victor-Kramer No.1 115 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_2298_P6 Loss of Roadway-Kramer No.1 115 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_2956_P6 Loss of Kramer-Twinkle No.1 230 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_3409_P6 Loss of Sandlot-Kramer No.1 230 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_3691_P6 Loss of Coolwater-Silver_Springs No.1 230 kV line and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_3760_P6 Loss of Kramer-Colwater No.1 115 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.72	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.74	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3761_P6 Loss of Kramer-Colwater No.1 115 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.61	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.15	system adjustments after first contingency mitigates the issue
	P6_3960_P6 Loss of Kramer-Tortilla No.1 115 kV line and Kramer 220 kV SVD ID ei	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_42_P6 Loss of Mojave Solar Projects and Kramer-Colwater No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_4412_P6 Loss of Kramer-Accelerate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.82	0.76	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24774 DUNNSIDE 115 kV	P2_1_P2.1 Line COLWATER 115.0 to DUNNSIDE 115.0 Circuit 1	P2	Line Section w/o Fault	0.9 < V < 1.05	0.90	1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.90	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P2_8_P2.1 Line BAKER 115.0 to MTN PASS 115.0 Circuit 1	P2	Line Section w/o Fault	0.9 < V < 1.05	0.90	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.89	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1046_P3 Loss of Daggett 1 Unit ID 1 and Ivanpah-Mtpass-Baker No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1309_P3 Loss of Daggett 3 Unit ID ALL and Ivanpah-Mtpass-Baker No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3244_P6 Loss of Kramer-Sungen No.1 115 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3760_P6 Loss of Kramer-Colwater No.1 115 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.78	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.80	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3761_P6 Loss of Kramer-Colwater No.1 115 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.71	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	system adjustments after first contingency mitigates the issue
	P6_4412_P6 Loss of Kramer-Accelerate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.78	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4444_P6 Loss of Accelerate-Tortilla No.1 115 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4657_P6 Loss of Hidden Springs-Colwater No.1 115 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1082_P3 Loss of Daggett 1 Unit ID 1 and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_131_P3 Loss of All HDPP ALL Units and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1632_P3 Loss of Navy1 Project ALL Units and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_1872_P3 Loss of Mammoth 1-3 Unit ID ALL and Casa Diablo-Rush line-shunt capacitor 230.0	P3	G-1/N-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2102_P3 Loss of Mammoth 1-3 Unit ID ALL and Eldorado-Lugo No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24775 RUSH 115 kV	P3_2121_P3 Loss of Mammoth 1-3 Unit ID ALL and Roadway-Hamlin No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2140_P3 Loss of Mammoth 1-3 Unit ID ALL and Sandlot-Ocaso No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2143_P3 Loss of Mammoth 1-3 Unit ID ALL and Coolwater-Segs2-Tortilla No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2156_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer-Inyokern-Randsburg No.3 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2176_P3 Loss of Mammoth 1-3 Unit ID ALL and Control-Inyo No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2184_P3 Loss of Mammoth 1-3 Unit ID ALL and Victor No.1 115/230 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2185_P3 Loss of Mammoth 1-3 Unit ID ALL and Victor No.2 115/230 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2186_P3 Loss of Mammoth 1-3 Unit ID ALL and Victor No.3 115/230 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2195_P3 Loss of Mammoth 1-3 Unit ID ALL and Inyo No.1 115/115 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2207_P3 Loss of Mammoth 1-3 Unit ID ALL and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2208_P3 Loss of Poole Unit ID 1 and Casa Diablo-Rush line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_2209_P3 Loss of Mammoth 1-3 Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.07	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2210_P3 Loss of Mammoth 1-3 Unit ID ALL and Casa Diablo-Rush line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2212_P3 Loss of Mammoth 1-3 Unit ID ALL and Control-TAP704 line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2330_P3 Loss of Rush Unit ID 1-2 and Casa Diablo-Rush line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2447_P3 Loss of Lundy Unit ID 1-2 and Control-Casa Diablo line-shunt capacitor 115.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2451_P3 Loss of Lundy Unit ID 1-2 and Control-TAP704 line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2681_P3 Loss of Bishop Creek 2 Unit ID 1 and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_405_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Casa Diablo-Rush line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_559_P3.1 Loss of BLM Facility Unit ID ALL and Mammoth 1-3 Unit ID ALL	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_2091_P6 Loss of Victor-Roadway No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_2268_P6 Loss of Victor-Kramer No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_232_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2355_P6 Loss of Roadway-Kramer No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_3753_P6 Loss of Coolwater-Silver_Springs No.1 230 kV line and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4823_P6 Loss of Control-Coso-Haiwee-Inyokern No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4987_P6 Loss of Casa Diablo-Control No.1 115 kV line and Control-Inyo No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5004_P6 Loss of Casa Diablo-Control No.1 115 kV line and Inyo No.1 115/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5355_P6 Loss of Silver Peak PS-Control Ckt A 55 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5393_P6 Loss of Control-Silver Peak Ps Ckt C 55 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5909_P6 Loss of Inyo No.1 115/115 kV transformer and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P6_6063_P6 Loss of Inyo Reactor 220 kV shunt and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P6_6071_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P6_6078_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P6_7098_P6 Loss of Inyo Reactor 220 kV shunt and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7106_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7113_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7114_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7120_P6 Loss of Casa Diablo-Rush line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	Base Case	P0	Base Case	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	1.06	1.06	0.9 < V < 1.05	1.06	1.06	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P3_1099_P3.1 Loss of Daggett2 Unit ID ALL and Mammoth 1-3 Unit ID ALL	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_131_P3 Loss of All HDPP ALL Units and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1720_P3 Loss of Resurgence 2 Unit ID ALL and Casa Diablo-Rush line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1842_P3 Loss of Navy1 Project Unit ID ALL and Control-Casa Diablo line-shunt capacitor 115.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1846_P3 Loss of Navy1 Project Unit ID ALL and Control-TAP704 line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1861_P3 Loss of Mammoth 1-3 Unit ID ALL and Silver Peak PS No.1 55/55 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P3_1872_P3 Loss of Mammoth 1-3 Unit ID ALL and Casa Diablo-Rush line-shunt capacitor 230.0	P3	G-1/N-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.07	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2088_P3 Loss of Casa Diablo 4 Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2109_P3 Loss of Mammoth 1-3 Unit ID ALL and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2130_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer-Sungen No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2189_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer No.2 115/230 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2196_P3 Loss of Mammoth 1-3 Unit ID ALL and Inyo PS No.1 115/230 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2207_P3 Loss of Mammoth 1-3 Unit ID ALL and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2209_P3 Loss of Mammoth 1-3 Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.07	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2210_P3 Loss of Mammoth 1-3 Unit ID ALL and Casa Diablo-Rush line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2212_P3 Loss of Mammoth 1-3 Unit ID ALL and Control-TAP704 line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2913_P3 Loss of Bishop Creek 5 Unit ID 1-2 and Control-Casa Diablo line-shunt capacitor 115.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2917_P3 Loss of Bishop Creek 5 Unit ID 1-2 and Control-TAP704 line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24776 LEE VINE 115 kV	P3_402_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_405_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Casa Diablo-Rush line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_425_P3.1 Loss of Lockhart Unit ID ALL and Mammoth 1-3 Unit ID ALL	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_692_P3.1 Loss of Aratina 1 (TOT773) Unit ID ALL and Mammoth 1-3 Unit ID ALL	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_824_P3.1 Loss of Aratina 2 (TOT904) Unit ID ALL and Mammoth 1-3 Unit ID ALL	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_232_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2775_P6 Loss of Kramer-Calcity No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_2856_P6 Loss of Calcity-Edwards-Holgate No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_3753_P6 Loss of Coolwater-Silver_Springs No.1 230 kV line and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3885_P6 Loss of Colwater-Segs2-Tortilla No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_4266_P6 Loss of Ivanpah-Colosseum 1 No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4326_P6 Loss of Ivanpah-Eldordo2 No.1 230 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4385_P6 Loss of Ivanpah-Primm No.1 230 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_531_P6 Loss of Lugo-Mohave No.1 500 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_5820_P6 Loss of Ivanpah No.3 115/230 kV transformer and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5843_P6 Loss of Ivanpah No.4 115/230 kV transformer and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5909_P6 Loss of Inyo No.1 115/115 kV transformer and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P6_6063_P6 Loss of Inyo Reactor 220 kV shunt and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P6_6070_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6071_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_6078_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_7098_P6 Loss of Inyo Reactor 220 kV shunt and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7106_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7113_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7114_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7120_P6 Loss of Casa Diablo-Rush line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24777 BAKER 115 kV	P2_1_P2.1 Line COLWATER 115.0 to DUNNSIDE 115.0 Circuit 1	P2	Line Section w/o Fault	0.9 < V < 1.05	0.90	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.90	0.9 < V < 1.05	Adjust Ivanpah Transformer tap as a part of system adjustments after first contingency mitigates the issue
	P2_7_P2.1 Line BAKER 115.0 to DUNNSIDE 115.0 Circuit 1	P2	Line Section w/o Fault	0.9 < V < 1.05	0.90	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.90	0.9 < V < 1.05	Adjust Ivanpah Transformer tap as a part of system adjustments after first contingency mitigates the issue
	P2_8_P2.1 Line BAKER 115.0 to MTN PASS 115.0 Circuit 1	P2	Line Section w/o Fault	0.84	0.81	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.80	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1046_P3 Loss of Daggett 1 Unit ID 1 and Ivanpah-Mtpass-Baker No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1309_P3 Loss of Daggett 3 Unit ID ALL and Ivanpah-Mtpass-Baker No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_984_P3.1 Loss of Daggett 1 Unit ID 1 and Colosseum Unit ID 1-3	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3244_P6 Loss of Kramer-Sungen No.1 115 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3760_P6 Loss of Kramer-Colwater No.1 115 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_3761_P6 Loss of Kramer-Colwater No.1 115 kV line and Kramer-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_4146_P6 Loss of Coolwater-Silvr_Sprngs No.1 230 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4222_P6 Loss of Kramer-Colwater No.1 115 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4297_P6 Loss of Colwater-Segs2-Tortilla No.1 115 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4371_P6 Loss of Kramer-Accelerate No.1 115 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4412_P6 Loss of Kramer-Accelerate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_4444_P6 Loss of Accelerate-Tortilla No.1 115 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4657_P6 Loss of Hidden Springs-Colwater No.1 115 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4833_P6 Loss of Ivanpah-Mtpass-Baker No.1 115 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4834_P6 Loss of Ivanpah-Mtpass-Baker No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1287_P3 Loss of Daggett3 Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1574_P3 Loss of Resurgence 1 Unit ID ALL and Kramer No.2 115/230 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1912_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1913_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Inyokern-Randsburg No.3 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2034_P3 Loss of Casa Diablo 4 Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2155_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2275_P3 Loss of Rush Unit ID 1-2 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2512_P3 Loss of Poole Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_350_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_485_P3 Loss of Lockhart Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_77_P3 Loss of All HDPP ALL Units and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24782 NAVY I 115 kV	P6_2393_P6 Loss of Kramer-Victor No.1 230 kV line and Kramer-Inyokern-Randsburg No.3 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_2478_P6 Loss of Kramer-Victor No.2 230 kV line and Kramer-Inyokern-Randsburg No.3 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_296_P6 Loss of Oxbow (Dixie Valley) Project and Lugo No.2 500/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_3702_P6 Loss of Coolwater-Silver_Springs No.1 230 kV line and Kramer-Inyokern-Randsburg No.3 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_4395_P6 Loss of Kramer-Inyokern No.1 115 kV line and Kramer-Inyokern-Randsburg No.3 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_4405_P6 Loss of Kramer-Inyokern No.1 115 kV line and Casa Diablo-Control No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4444_P6 Loss of Kramer-Inyokern No.1 115 kV line and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4445_P6 Loss of Kramer-Inyokern No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4464_P6 Loss of Kramer-Inyokern-Randsburg No.3 115 kV line and Casa Diablo-Rush No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_4502_P6 Loss of Kramer-Inyokern-Randsburg No.3 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_5478_P6 Loss of DWP Inyo-Owenscon No.1 230 kV line and Lugo No.1 500/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P2_9_P2.1 Line TAP710 115.0 to INYOKERN 115.0 Circuit 1	P2	Line Section w/o Fault	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	1.06	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1287_P3 Loss of Daggett3 Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1912_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1913_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Inyokern-Randsburg No.3 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2155_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2275_P3 Loss of Rush Unit ID 1-2 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2512_P3 Loss of Poole Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2745_P3 Loss of Bishop Creek 4 Unit ID 1-5 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2860_P3 Loss of Bishop Creek 5 Unit ID 1-2 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_350_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24790 COSO 115 kV	P3_485_P3 Loss of Lockhart Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_77_P3 Loss of All HDPP ALL Units and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_884_P3 Loss of Aratina 2 (TOT904) Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_320_P6 Loss of Oxbow (Dixie Valley) Project and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_322_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_4395_P6 Loss of Kramer-Inyokern No.1 115 kV line and Kramer-Inyokern-Randsburg No.3 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_4502_P6 Loss of Kramer-Inyokern-Randsburg No.3 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_4978_P6 Loss of Casa Diablo-Control No.1 115 kV line and Control-Casa Diablo-Shrwn No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5858_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7105_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7114_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P2_9_P2.1 Line TAP710 115.0 to INYOKERN 115.0 Circuit 1	P2	Line Section w/o Fault	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	1.06	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1287_P3 Loss of Daggett3 Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1912_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1913_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Inyokern-Randsburg No.3 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24791 TAP710 115 kV	P3_2155_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2275_P3 Loss of Rush Unit ID 1-2 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2512_P3 Loss of Poole Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2745_P3 Loss of Bishop Creek 4 Unit ID 1-5 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2860_P3 Loss of Bishop Creek 5 Unit ID 1-2 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_350_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_485_P3 Loss of Lockhart Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_77_P3 Loss of All HDPP ALL Units and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_884_P3 Loss of Aratina 2 (TOT904) Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_320_P6 Loss of Oxbow (Dixie Valley) Project and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_322_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_4395_P6 Loss of Kramer-Inyokern No.1 115 kV line and Kramer-Inyokern-Randsburg No.3 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_4502_P6 Loss of Kramer-Inyokern-Randsburg No.3 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_4978_P6 Loss of Casa Diablo-Control No.1 115 kV line and Control-Casa Diablo-Shrwn No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5858_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7105_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7114_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24792 DOWNS 115 kV	P3_1033_P3 Loss of Daggett 1 Unit ID 1 and Inyokern-Downs No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.12	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1287_P3 Loss of Daggett3 Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1912_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1915_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Inyokern-Downs No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.12	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2034_P3 Loss of Casa Diablo 4 Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2037_P3 Loss of Casa Diablo 4 Unit ID 1 and Inyokern-Downs No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.12	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2155_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2275_P3 Loss of Rush Unit ID 1-2 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2278_P3 Loss of Rush Unit ID 1-2 and Inyokern-Downs No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.12	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2512_P3 Loss of Poole Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2515_P3 Loss of Poole Unit ID 1 and Inyokern-Downs No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.12	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_350_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_485_P3 Loss of Lockhart Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_884_P3 Loss of Aratina 2 (TOT904) Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P2_9_P2.1 Line TAP710 115.0 to INYOKERN 115.0 Circuit 1	P2	Line Section w/o Fault	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	1.07	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1912_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1913_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Inyokern-Randsburg No.3 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24865 TAP188 115 kV	P3_2155_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2275_P3 Loss of Rush Unit ID 1-2 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2512_P3 Loss of Poole Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2745_P3 Loss of Bishop Creek 4 Unit ID 1-5 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2860_P3 Loss of Bishop Creek 5 Unit ID 1-2 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_350_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_485_P3 Loss of Lockhart Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_77_P3 Loss of All HDPP ALL Units and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_884_P3 Loss of Aratina 2 (TOT904) Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_320_P6 Loss of Oxbow (Dixie Valley) Project and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_4395_P6 Loss of Kramer-Inyokern No.1 115 kV line and Kramer-Inyokern-Randsburg No.3 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_4502_P6 Loss of Kramer-Inyokern-Randsburg No.3 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_4978_P6 Loss of Casa Diablo-Control No.1 115 kV line and Control-Casa Diablo-Shrwn No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5858_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7105_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7114_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1912_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24866 TAP189 115 kV	P3_1913_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Inyokern-Randsburg No.3 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1924_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Control-Casa Diablo-Shrwn No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2155_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2262_P3 Loss of Rush Unit ID 1-2 and Inyo Reactor 220 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2275_P3 Loss of Rush Unit ID 1-2 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2512_P3 Loss of Poole Unit ID 1 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2745_P3 Loss of Bishop Creek 4 Unit ID 1-5 and Kramer-Inyokern No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_320_P6 Loss of Oxbow (Dixie Valley) Project and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_322_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_4395_P6 Loss of Kramer-Inyokern No.1 115 kV line and Kramer-Inyokern-Randsburg No.3 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_4502_P6 Loss of Kramer-Inyokern-Randsburg No.3 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_5188_P6 Loss of Kramer-Inyokern No.1 115 kV line and Kramer-Inyokern-Randsburg No.3 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5493_P6 Loss of Cal Gen-Inyokern No.1 115 kV line and Casa Diablo-Control No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5700_P6 Loss of BishopCreek34-Control No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5858_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6392_P6 Loss of DWP Inyo-Owenscon No.1 230 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_7105_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7114_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P1_49_P1.2 Loss of Kramer-Holgate No.1 115 kV line	P1	N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1001_P3 Loss of Daggett 1 Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1130_P3 Loss of Daggett2 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1258_P3 Loss of Daggett3 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1322_P3 Loss of Resurgence 1 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1385_P3 Loss of Colosseum ALL Unit ID 1-3 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1511_P3 Loss of Resurgence 1 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1544_P3 Loss of Resurgence 1 Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1760_P3 Loss of Navy1 Project Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1883_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2005_P3 Loss of Casa Diablo 4 Unit ID 1 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2246_P3 Loss of Rush Unit ID 1-2 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2365_P3 Loss of Lundy Unit ID 1-2 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2831_P3 Loss of Bishop Creek 5 Unit ID 1-2 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_321_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_456_P3 Loss of Lockhart Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_48_P3 Loss of All HDPP ALL Units and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24896 BORAX 115 kV	P3_590_P3 Loss of BLM Facility Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_723_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and Kramer-Holgate No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2536_P6 Loss of Kramer-Holgate No.1 115 kV line and Holgate-Southbase-Edwards No.1 115 kV line	P6	N-1-1	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2539_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Sungen No.1 115 kV line	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2550_P6 Loss of Kramer-Holgate No.1 115 kV line and Coolwater-Silver_Springs No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2594_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_26_P6 Loss of Mojave Solar Projects and Kramer-Holgate No.1 115 kV line	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2863_P6 Loss of Kramer-Holgate No.1 115 kV line and Holgate-Southbase-Edwards No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.10	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2866_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Sungen No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2871_P6 Loss of Kramer-Holgate No.1 115 kV line and LUZ LSP-Kramer No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2873_P6 Loss of Kramer-Holgate No.1 115 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2879_P6 Loss of Kramer-Holgate No.1 115 kV line and Colwater-Segs2-Tortilla No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2886_P6 Loss of Kramer-Holgate No.1 115 kV line and Ivanpah-Mtpass-Baker No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2892_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Inyokern No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2893_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer-Inyokern-Randsburg No.3 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2916_P6 Loss of Kramer-Holgate No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2917_P6 Loss of Kramer-Holgate No.1 115 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2925_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2926_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2927_P6 Loss of Kramer-Holgate No.1 115 kV line and Colwater No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_2938_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer Reactor 230 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2939_P6 Loss of Kramer-Holgate No.1 115 kV line and Kramer Cap 115 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2941_P6 Loss of Kramer-Holgate No.1 115 kV line and Tortilla Cap 115 kV shunt (b1)	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5755_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6706_P6 Loss of Kramer No.1 115/230 kV transformer and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	PX_2_PX.1 N-2 Loss of All KRAMER 230-115 kV AA Banks	Extreme	Extreme	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	Base Case	P0	Base Case	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_1000_P3 Loss of Daggett 2 ALL Units and Control-Casa Diablo-Shrwn No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_131_P3 Loss of All HDPP ALL Units and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1718_P3 Loss of Casa Diablo 4 Unit ID 1 and Control-Casa Diablo-Shrwn No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_1769_P3.1 Loss of Mammoth 1-3 Unit ID ALL and Bishop 4 Unit ID 1-5	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1802_P3 Loss of Mammoth 1-3 Unit ID ALL and BLM West-Kramer No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1864_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer Reactor 230 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2168_P3 Loss of Poole Unit ID 1 and Control-Casa Diablo-Shrwn No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_2209_P3 Loss of Mammoth 1-3 Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2287_P3 Loss of Rush Unit ID 1-2 and Control-Casa Diablo-Shrwn No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2329_P3 Loss of Rush Unit ID 1-2 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2799_P3 Loss of Bishop Creek 4 Unit ID 1-5 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
25782 BISHOP3 115 kV	P3_539_P3 Loss of Lockhart Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_230_P6 Loss of Oxbow (Dixie Valley) Project and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_232_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_322_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_4432_P6 Loss of Kramer-Inyokern No.1 115 kV line and Inyo No.1 115/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_4978_P6 Loss of Casa Diablo-Control No.1 115 kV line and Control-Casa Diablo-Shrwn No.1 115 kV line	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	system adjustments after first contingency mitigates the issue
	P6_5015_P6 Loss of Casa Diablo-Control No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5017_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.10	system adjustments after first contingency mitigates the issue
	P6_5045_P6 Loss of Control-Casa Diablo-Shrwn No.1 115 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5501_P6 Loss of DWP Inyo-Owenscon No.1 230 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5858_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5898_P6 Loss of Inyo No.1 115/115 kV transformer and Silver Peak PS No.1 55/55 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5908_P6 Loss of Inyo No.1 115/115 kV transformer and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_6062_P6 Loss of Inyo Reactor 220 kV shunt and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6070_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_6078_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7097_P6 Loss of Inyo Reactor 220 kV shunt and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7105_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7114_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	Base Case	P0	Base Case	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
25784 BISHOP4 115 kV	P3_131_P3 Loss of All HDPP ALL Units and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_17_P3.1 Loss of All HDPP All Units and Mammoth 1-3 Unit ID ALL	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1852_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer No.1 115/230 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1864_P3 Loss of Mammoth 1-3 Unit ID ALL and Kramer Reactor 230 kV shunt	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1945_P3 Loss of Rush Unit ID 1-2 and Control-Casa Diablo-Shrwn No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2209_P3 Loss of Mammoth 1-3 Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2287_P3 Loss of Rush Unit ID 1-2 and Control-Casa Diablo-Shrwn No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2329_P3 Loss of Rush Unit ID 1-2 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2799_P3 Loss of Bishop Creek 4 Unit ID 1-5 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_531_P3.1 Loss of BLM Facility Unit ID ALL and Mammoth 1-3 Unit ID ALL	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P3_539_P3 Loss of Lockhart Unit ID ALL and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_85_P3 Loss of All HDPP All Units and Control-Casa Diablo-Shrwn No.1 115 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_230_P6 Loss of Oxbow (Dixie Valley) Project and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_232_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_322_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_4978_P6 Loss of Casa Diablo-Control No.1 115 kV line and Control-Casa Diablo-Shrwn No.1 115 kV line	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_5004_P6 Loss of Casa Diablo-Control No.1 115 kV line and Inyo No.1 115/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5015_P6 Loss of Casa Diablo-Control No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_5017_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_5052_P6 Loss of Control-Casa Diablo-Shrwn No.1 115 kV line and Inyo PS No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_5122_P6 Loss of Lee Vine-Rush No.1 115 kV line and Control-Inyo No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_5248_P6 Loss of BishopCreek56-Control No.1 55 kV line and Control-Inyo No.1 115 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5858_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5869_P6 Loss of Control No.1 55/115 kV transformer and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_5908_P6 Loss of Inyo No.1 115/115 kV transformer and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_6062_P6 Loss of Inyo Reactor 220 kV shunt and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6070_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_7097_P6 Loss of Inyo Reactor 220 kV shunt and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7105_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7114_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P1_32_P1.2 Loss of Lugo-Victorvil No.1 500 kV line	P1	N-1	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1113_P3 Loss of Daggett2 Unit ID ALL and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1241_P3 Loss of Daggett3 Unit ID ALL and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1368_P3 Loss of Colosseum ALL Unit ID 1-3 and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1866_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1988_P3 Loss of Casa Diablo 4 Unit ID 1 and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2109_P3 Loss of Mammoth 1-3 Unit ID ALL and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2229_P3 Loss of Rush Unit ID 1-2 and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P3_2348_P3 Loss of Lundy Unit ID 1-2 and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2466_P3 Loss of Poole Unit ID 1 and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2814_P3 Loss of Bishop Creek 5 Unit ID 1-2 and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_304_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_31_P3 Loss of All HDPP ALL Units and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_31_P3 Loss of All HDPP All Units and Lugo-Victorville No.1 500 kV line	P3	G-1/N-1	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_439_P3 Loss of Lockhart Unit ID ALL and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_671_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and Lugo-Victorville No.1 500 kV line	P3	G-1/N-1	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_706_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_838_P3 Loss of Aratina 2 (TOT904) Unit ID ALL and Lugo-Victorvil No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P4_2_Lugo - Victorville 500 kV and Lugo - Vincent No.2 500 kV - SLG 15 cycle fault at Lugo 500	P4	Stuck Breaker	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_10_P6 Loss of Mojave Solar Projects and Lugo-Victorville No.1 500 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_1069_P6 Loss of Lugo-Victorville No.1 500 kV line and Kramer-Victor No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_1075_P6 Loss of Lugo-Victorville No.1 500 kV line and Kramer-Sungen No.1 115 kV line	P6	N-1-1	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_1076_P6 Loss of Lugo-Victorville No.1 500 kV line and Kramer-Twinkle No.1 230 kV line	P6	N-1-1	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_1084_P6 Loss of Lugo-Victorville No.1 500 kV line and Sandlot-Alba No.1 230 kV line	P6	N-1-1	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_1086_P6 Loss of Lugo-Victorville No.1 500 kV line and Coolwater-Silver_Springs No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_1121_P6 Loss of Lugo-Victorville No.1 500 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_1130_P6 Loss of Lugo-Victorville No.1 500 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_227_P6 Loss of Oxbow (Dixie Valley) Project and Lugo-Victorville No.1 500 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_334_P6 Loss of Eldordo-Lugo No.1 500 kV line and Lugo-Victorville No.1 500 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_545_P6 Loss of Lugo-Vincent No.1 500 kV line and Lugo-Victorville No.1 500 kV line	P6	N-1-1	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_649_P6 Loss of Lugo-Vincent No.2 500 kV line and Lugo-Victorville No.1 500 kV line	P6	N-1-1	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_955_P6 Loss of Lugo-RanchVista No.1 500 kV line and Lugo-Victorville No.1 500 kV line	P6	N-1-1	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24601 VICTOR 230 kV	P6_2419_P6 Loss of Kramer-Victor No.1 230 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.90	Existing HDPP RAS and Congestion management
	P6_2504_P6 Loss of Kramer-Victor No.2 230 kV line and Lugo No.2 500/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.90	Existing HDPP RAS and congestion management
24717 COLWATER 230 kV	P6_1082_P6 Loss of Lugo-Victorville No.1 500 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	Existing Mohave Desert RAS and congestion management
	P6_1937_P6 Loss of Victor-HiDesert No.1 230 kV line and Sandlot-Kramer No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	Existing Mohave Desert RAS and congestion management
	P6_3443_P6 Loss of Sandlot-Kramer No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.9 < V < 1.05	Existing Mohave Desert RAS and congestion management
	P6_3451_P6 Loss of Sandlot-Kramer No.1 230 kV line and Kramer No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	Existing Mohave Desert RAS and congestion management
	P6_3452_P6 Loss of Sandlot-Kramer No.1 230 kV line and Kramer No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	Existing Mohave Desert RAS and congestion management
	P3_1054_P3 Loss of Daggett 1 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.81	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1311_P3 Loss of Daggett3 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1564_P3 Loss of Resurgence 1 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.80	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1813_P3 Loss of Navy1 Project Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1934_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and DWP Inyo-Inyo No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.89	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1936_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1937_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2058_P3 Loss of Casa Diablo 4 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2059_P3 Loss of Casa Diablo 4 Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24729 INYO 230 kV	P3_2179_P3 Loss of Mammoth 1-3 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2180_P3 Loss of Poole Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.69	system adjustments after first contingency mitigates the issue
	P3_2299_P3 Loss of Rush Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_238_P3 Loss of Hi5Solar All Units and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2418_P3 Loss of Lundy Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2419_P3 Loss of Lundy Unit ID 1-2 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2537_P3 Loss of Poole Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2653_P3 Loss of Bishop Creek 2 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2769_P3 Loss of Bishop Creek 4 Unit ID 1-5 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.72	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2884_P3 Loss of Bishop Creek 5 Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2885_P3 Loss of Bishop Creek 5 Unit ID 1-2 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_509_P3 Loss of Lockhart Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_643_P3 Loss of BLM Facility Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2416_P6 Loss of Kramer-Victor No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2501_P6 Loss of Kramer-Victor No.2 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_293_P6 Loss of Oxbow (Dixie Valley) Project and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.66	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4846_P6 Loss of BishopCreek34-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4893_P6 Loss of Oxbow B-Control No.1 115 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.90	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.90	system adjustments after first contingency mitigates the issue
	P6_4941_P6 Loss of Oxbow B-Oxbow A No.1 230 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.90	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.90	system adjustments after first contingency mitigates the issue
	P6_4990_P6 Loss of Casa Diablo-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.73	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.74	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_4991_P6 Loss of Casa Diablo-Control No.1 115 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.71	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5081_P6 Loss of Casa Diablo-Rush No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.73	system adjustments after first contingency mitigates the issue
	P6_5251_P6 Loss of BishopCreek56-Control No.1 55 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5456_P6 Loss of DWP Inyo-Inyo No.1 230 kV line and Inyo PS No.1 115/230 kV transformer	P6	N-1-1	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.89	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.89	system adjustments after first contingency mitigates the issue
	P6_5457_P6 Loss of DWP Inyo-Inyo No.1 230 kV line and Inyo PS No.2 115/230 kV transformer	P6	N-1-1	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.89	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.90	system adjustments after first contingency mitigates the issue
	P6_5522_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.1 55/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5523_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.3 55/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5536_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.78	system adjustments after first contingency mitigates the issue
	P6_5538_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.74	system adjustments after first contingency mitigates the issue
	P6_5562_P6 Loss of Control-Haiwee-Inyokern No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5568_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.89	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.89	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5569_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	0.72	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.72	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5570_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.74	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5617_P6 Loss of Control-Coso-Haiwee-Inyokern No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.78	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5724_P6 Loss of Oxbow B-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5776_P6 Loss of Oxbow B-Oxbow A No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5856_P6 Loss of Casa Diablo-Control No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6311_P6 Loss of Control-Inyo No.1 115 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6400_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6465_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_6900_P6 Loss of Inyo No.1 115/115 kV transformer and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6921_P6 Loss of Inyo PS No.1 115/230 kV transformer and Inyo Reactor 220 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7097_P6 Loss of Inyo Reactor 220 kV shunt and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
24748 OXBOW A 230 kV	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.19	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.19	0.9 < V < 1.05	1.18	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_230_P6 Loss of Oxbow (Dixie Valley) Project and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.08	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_232_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.20	1.19	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_293_P6 Loss of Oxbow (Dixie Valley) Project and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.91	0.9 < V < 1.05	0.93	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_320_P6 Loss of Oxbow (Dixie Valley) Project and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	1.06	0.9 < V < 1.05	1.09	system adjustments after first contingency mitigates the issue
	P6_322_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.17	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.21	0.9 < V < 1.05	1.17	0.9 < V < 1.05	1.21	system adjustments after first contingency mitigates the issue
	P6_5019_P6 Loss of Casa Diablo-Control No.1 115 kV line and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_5470_P6 Loss of DWP Inyo-Inyo No.1 230 kV line and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6064_P6 Loss of Inyo Reactor 220 kV shunt and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6072_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_6079_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	1.08	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.08	0.9 < V < 1.05	1.08	system adjustments after first contingency mitigates the issue
	P3_1966_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and From OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1968_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P3	G-1/N-1	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	1.06	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_230_P6 Loss of Oxbow (Dixie Valley) Project and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.06	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_232_P6 Loss of Oxbow (Dixie Valley) Project and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_293_P6 Loss of Oxbow (Dixie Valley) Project and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.85	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.90	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
24760 OXBOW B 230 kV	P6_320_P6 Loss of Oxbow (Dixie Valley) Project and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.07	system adjustments after first contingency mitigates the issue
	P6_4941_P6 Loss of Oxbow B-Oxbow A No.1 230 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5017_P6 Loss of Casa Diablo-Control No.1 115 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_5562_P6 Loss of Control-Haiwee-Inyokern No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.90	0.89	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5617_P6 Loss of Control-Coso-Haiwee-Inyokern No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.89	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5776_P6 Loss of Oxbow B-Oxbow A No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.89	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6070_P6 Loss of Control-Casa Diablo line-shunt capacitor 115.0 and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	system adjustments after first contingency mitigates the issue
	P6_6079_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	system adjustments after first contingency mitigates the issue
	P6_6400_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.90	0.89	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_7114_P6 Loss of From OxbowB-OxbowA line-shunt capacitor 230.0 and TO OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.07	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
25003 DSRTSTLN 230 kV	P3_1227_P3 Loss of Colosseum Unit 1-3 and Ivanpah-Eldordo2 No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.06	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1228_P3 Loss of Colosseum Unit 1-3 and Ivanpah-Primm No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
25343 RP_Calcite_H 230 kV	P6_1146_P6 Loss of Lugo-Pisgah No.2 230 kV line and Calcite-Lugo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
25500 CALCITE 230 kV	P6_1146_P6 Loss of Lugo-Pisgah No.2 230 kV line and Calcite-Lugo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_100_P3 Loss of All HDPP ALL Units and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.30	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1054_P3 Loss of Daggett 1 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.81	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1182_P3 Loss of Daggett2 Unit ID ALL and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.26	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1311_P3 Loss of Daggett3 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1564_P3 Loss of Resurgence 1 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.80	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1724_P3 Loss of Resurgence 2 Unit ID ALL and DWP Inyo-Inyo No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P3_1813_P3 Loss of Navy1 Project Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1936_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1937_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2058_P3 Loss of Casa Diablo 4 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2059_P3 Loss of Casa Diablo 4 Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2179_P3 Loss of Mammoth 1-3 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2180_P3 Loss of Poole Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.69	system adjustments after first contingency mitigates the issue
	P3_2299_P3 Loss of Rush Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_237_P3 Loss of Hi5Solar All Units and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.26	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_238_P3 Loss of Hi5Solar All Units and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2418_P3 Loss of Lundy Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2419_P3 Loss of Lundy Unit ID 1-2 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2537_P3 Loss of Poole Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2653_P3 Loss of Bishop Creek 2 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2769_P3 Loss of Bishop Creek 4 Unit ID 1-5 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.72	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2884_P3 Loss of Bishop Creek 5 Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2885_P3 Loss of Bishop Creek 5 Unit ID 1-2 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_509_P3 Loss of Lockhart Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_642_P3 Loss of BLM Facility Unit ID ALL and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.26	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_643_P3 Loss of BLM Facility Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
26129 OWENS UP 230 kV	P3_775_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.26	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_908_P3 Loss of Aratina 2 (TOT904) Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_197_P6 Loss of Oxbow (Dixie Valley) Project and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2416_P6 Loss of Kramer-Victor No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2501_P6 Loss of Kramer-Victor No.2 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_293_P6 Loss of Oxbow (Dixie Valley) Project and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.65	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4846_P6 Loss of BishopCreek34-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4990_P6 Loss of Casa Diablo-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.84	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.73	0.9 < V < 1.05	0.84	0.9 < V < 1.05	0.74	system adjustments after first contingency mitigates the issue
	P6_4991_P6 Loss of Casa Diablo-Control No.1 115 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.71	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5020_P6 Loss of Ivanpah-Colosem1 No.1 115 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5081_P6 Loss of Casa Diablo-Rush No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.73	system adjustments after first contingency mitigates the issue
	P6_5251_P6 Loss of BishopCreek56-Control No.1 55 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5522_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.1 55/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5523_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.3 55/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5536_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	0.84	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.9 < V < 1.05	0.84	0.9 < V < 1.05	0.78	system adjustments after first contingency mitigates the issue
	P6_5537_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.85	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.82	0.9 < V < 1.05	0.84	0.9 < V < 1.05	0.80	system adjustments after first contingency mitigates the issue
	P6_5538_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.82	0.9 < V < 1.05	0.74	system adjustments after first contingency mitigates the issue
	P6_5562_P6 Loss of Control-Haiwee-Inyokern No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5568_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.89	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.89	0.9 < V < 1.05	0.84	system adjustments after first contingency mitigates the issue
	P6_5569_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	0.72	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.72	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_5570_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.74	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5617_P6 Loss of Control-Coso-Haiwee-Inyokern No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.78	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5722_P6 Loss of Oxbow B-Control No.1 115 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5724_P6 Loss of Oxbow B-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5774_P6 Loss of Oxbow B-Oxbow A No.1 230 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.10	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5776_P6 Loss of Oxbow B-Oxbow A No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6400_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_100_P3 Loss of All HDPP ALL Units and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.30	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1054_P3 Loss of Daggett 1 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.81	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1182_P3 Loss of Daggett2 Unit ID ALL and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.26	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1311_P3 Loss of Daggett3 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1564_P3 Loss of Resurgence 1 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.80	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1724_P3 Loss of Resurgence 2 Unit ID ALL and DWP Inyo-Inyo No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1813_P3 Loss of Navy1 Project Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1936_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1937_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2058_P3 Loss of Casa Diablo 4 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2059_P3 Loss of Casa Diablo 4 Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2179_P3 Loss of Mammoth 1-3 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2180_P3 Loss of Poole Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.69	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
26130 OWENSMID 230 kV	P3_2299_P3 Loss of Rush Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_237_P3 Loss of Hi5Solar All Units and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.26	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_238_P3 Loss of Hi5Solar All Units and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2418_P3 Loss of Lundy Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2419_P3 Loss of Lundy Unit ID 1-2 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2537_P3 Loss of Poole Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2653_P3 Loss of Bishop Creek 2 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2769_P3 Loss of Bishop Creek 4 Unit ID 1-5 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.72	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2884_P3 Loss of Bishop Creek 5 Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2885_P3 Loss of Bishop Creek 5 Unit ID 1-2 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_509_P3 Loss of Lockhart Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_642_P3 Loss of BLM Facility Unit ID ALL and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.26	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_643_P3 Loss of BLM Facility Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_775_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.26	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_908_P3 Loss of Aratina 2 (TOT904) Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_197_P6 Loss of Oxbow (Dixie Valley) Project and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2416_P6 Loss of Kramer-Victor No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2501_P6 Loss of Kramer-Victor No.2 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_293_P6 Loss of Oxbow (Dixie Valley) Project and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.65	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4846_P6 Loss of BishopCreek34-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_4990_P6 Loss of Casa Diablo-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.84	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.73	0.9 < V < 1.05	0.84	0.9 < V < 1.05	0.74	system adjustments after first contingency mitigates the issue
	P6_4991_P6 Loss of Casa Diablo-Control No.1 115 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.71	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5020_P6 Loss of Ivanpah-Colosem1 No.1 115 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5081_P6 Loss of Casa Diablo-Rush No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.73	system adjustments after first contingency mitigates the issue
	P6_5251_P6 Loss of BishopCreek56-Control No.1 55 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5522_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.1 55/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5523_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.3 55/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5536_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	0.84	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.9 < V < 1.05	0.84	0.9 < V < 1.05	0.78	system adjustments after first contingency mitigates the issue
	P6_5537_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.85	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.82	0.9 < V < 1.05	0.84	0.9 < V < 1.05	0.80	system adjustments after first contingency mitigates the issue
	P6_5538_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.82	0.9 < V < 1.05	0.74	system adjustments after first contingency mitigates the issue
	P6_5562_P6 Loss of Control-Haiwee-Inyokern No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5568_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.89	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.89	0.9 < V < 1.05	0.84	system adjustments after first contingency mitigates the issue
	P6_5569_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	0.72	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.72	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5570_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.74	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5617_P6 Loss of Control-Coso-Haiwee-Inyokern No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.78	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5722_P6 Loss of Oxbow B-Control No.1 115 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5724_P6 Loss of Oxbow B-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5774_P6 Loss of Oxbow B-Oxbow A No.1 230 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5776_P6 Loss of Oxbow B-Oxbow A No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6400_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P3_100_P3 Loss of All HDPP ALL Units and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.30	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1054_P3 Loss of Daggett 1 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.81	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1182_P3 Loss of Daggett2 Unit ID ALL and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.26	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1311_P3 Loss of Daggett3 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1564_P3 Loss of Resurgence 1 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.80	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1724_P3 Loss of Resurgence 2 Unit ID ALL and DWP Inyo-Inyo No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1813_P3 Loss of Navy1 Project Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1936_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1937_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2058_P3 Loss of Casa Diablo 4 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2059_P3 Loss of Casa Diablo 4 Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2179_P3 Loss of Mammoth 1-3 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2180_P3 Loss of Poole Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.69	system adjustments after first contingency mitigates the issue
	P3_2299_P3 Loss of Rush Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_237_P3 Loss of Hi5Solar All Units and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.26	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_238_P3 Loss of Hi5Solar All Units and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2418_P3 Loss of Lundy Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2419_P3 Loss of Lundy Unit ID 1-2 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2537_P3 Loss of Poole Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2653_P3 Loss of Bishop Creek 2 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
26131 OWENSCON 230 kV	P3_2769_P3 Loss of Bishop Creek 4 Unit ID 1-5 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.72	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2884_P3 Loss of Bishop Creek 5 Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2885_P3 Loss of Bishop Creek 5 Unit ID 1-2 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_509_P3 Loss of Lockhart Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_642_P3 Loss of BLM Facility Unit ID ALL and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.26	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_643_P3 Loss of BLM Facility Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_775_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and DWP Inyo-Owenscon No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.26	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_908_P3 Loss of Aratina 2 (TOT904) Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_197_P6 Loss of Oxbow (Dixie Valley) Project and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2416_P6 Loss of Kramer-Victor No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2501_P6 Loss of Kramer-Victor No.2 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_293_P6 Loss of Oxbow (Dixie Valley) Project and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.65	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4846_P6 Loss of BishopCreek34-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4990_P6 Loss of Casa Diablo-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.84	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.73	0.9 < V < 1.05	0.84	0.9 < V < 1.05	0.74	system adjustments after first contingency mitigates the issue
	P6_4991_P6 Loss of Casa Diablo-Control No.1 115 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.71	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5020_P6 Loss of Ivanpah-Colosem1 No.1 115 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5081_P6 Loss of Casa Diablo-Rush No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.73	system adjustments after first contingency mitigates the issue
	P6_5251_P6 Loss of BishopCreek56-Control No.1 55 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5522_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.1 55/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5523_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.3 55/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_5536_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	0.84	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.9 < V < 1.05	0.84	0.9 < V < 1.05	0.78	system adjustments after first contingency mitigates the issue
	P6_5537_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.85	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.82	0.9 < V < 1.05	0.84	0.9 < V < 1.05	0.80	system adjustments after first contingency mitigates the issue
	P6_5538_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.82	0.9 < V < 1.05	0.74	system adjustments after first contingency mitigates the issue
	P6_5562_P6 Loss of Control-Haiwee-Inyokern No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5568_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.89	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.89	0.9 < V < 1.05	0.84	system adjustments after first contingency mitigates the issue
	P6_5569_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	0.72	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.72	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5570_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.74	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5617_P6 Loss of Control-Coso-Haiwee-Inyokern No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.78	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5722_P6 Loss of Oxbow B-Control No.1 115 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5724_P6 Loss of Oxbow B-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5774_P6 Loss of Oxbow B-Oxbow A No.1 230 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5776_P6 Loss of Oxbow B-Oxbow A No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6400_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1054_P3 Loss of Daggett 1 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.81	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1311_P3 Loss of Daggett3 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1439_P3 Loss of Colosseum ALL Unit ID 1-3 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1564_P3 Loss of Resurgence 1 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.80	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1724_P3 Loss of Resurgence 2 Unit ID ALL and DWP Inyo-Inyo No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1813_P3 Loss of Navy1 Project Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1936_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.91	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P3_1937_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2058_P3 Loss of Casa Diablo 4 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2059_P3 Loss of Casa Diablo 4 Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2179_P3 Loss of Mammoth 1-3 Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2180_P3 Loss of Poole Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.69	system adjustments after first contingency mitigates the issue
	P3_2299_P3 Loss of Rush Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_238_P3 Loss of Hi5Solar All Units and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2418_P3 Loss of Lundy Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2419_P3 Loss of Lundy Unit ID 1-2 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2537_P3 Loss of Poole Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2653_P3 Loss of Bishop Creek 2 Unit ID 1 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2654_P3 Loss of Bishop Creek 2 Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.89	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2769_P3 Loss of Bishop Creek 4 Unit ID 1-5 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.72	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2884_P3 Loss of Bishop Creek 5 Unit ID 1-2 and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.77	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2885_P3 Loss of Bishop Creek 5 Unit ID 1-2 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_375_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_509_P3 Loss of Lockhart Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_643_P3 Loss of BLM Facility Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_777_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
26134 DWP INYO 230 kV	P3_908_P3 Loss of Aratina 2 (TOT904) Unit ID ALL and DWP Inyo-Cottonwd No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_197_P6 Loss of Oxbow (Dixie Valley) Project and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2416_P6 Loss of Kramer-Victor No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2501_P6 Loss of Kramer-Victor No.2 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_293_P6 Loss of Oxbow (Dixie Valley) Project and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.66	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4846_P6 Loss of BishopCreek34-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.76	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4990_P6 Loss of Casa Diablo-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.84	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.73	0.9 < V < 1.05	0.84	0.9 < V < 1.05	0.74	system adjustments after first contingency mitigates the issue
	P6_4991_P6 Loss of Casa Diablo-Control No.1 115 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.71	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5020_P6 Loss of Ivanpah-Colosem1 No.1 115 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5081_P6 Loss of Casa Diablo-Rush No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.73	system adjustments after first contingency mitigates the issue
	P6_5251_P6 Loss of BishopCreek56-Control No.1 55 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5477_P6 Loss of DWP Inyo-Owenscon No.1 230 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.88	system adjustments after first contingency mitigates the issue
	P6_5522_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.1 55/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5523_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control No.3 55/115 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5536_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	0.84	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.9 < V < 1.05	0.84	0.9 < V < 1.05	0.78	system adjustments after first contingency mitigates the issue
	P6_5537_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.85	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.82	0.9 < V < 1.05	0.84	0.9 < V < 1.05	0.80	system adjustments after first contingency mitigates the issue
	P6_5538_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and Casa Diablo-Rush line-shunt capacitor 230.0	P6	N-1-1	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.79	0.9 < V < 1.05	0.82	0.9 < V < 1.05	0.74	system adjustments after first contingency mitigates the issue
	P6_5562_P6 Loss of Control-Haiwee-Inyokern No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.77	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5568_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.89	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.89	0.9 < V < 1.05	0.84	system adjustments after first contingency mitigates the issue
	P6_5569_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	0.72	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.72	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5570_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.74	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_5617_P6 Loss of Control-Coso-Haiwee-Inyokern No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.81	0.78	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5722_P6 Loss of Oxbow B-Control No.1 115 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5724_P6 Loss of Oxbow B-Control No.1 115 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5774_P6 Loss of Oxbow B-Oxbow A No.1 230 kV line and DWP Inyo-Inyo No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.09	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5776_P6 Loss of Oxbow B-Oxbow A No.1 230 kV line and DWP Inyo-Cottonwd No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.82	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6400_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.75	0.74	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
26136 COTTONWD 230 kV	P3_1184_P3 Loss of Daggett2 Unit ID ALL and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1439_P3 Loss of Colosseum ALL Unit ID 1-3 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1937_P3 Loss of Oxbow (Dixie Valley) Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.85	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2059_P3 Loss of Casa Diablo 4 Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2419_P3 Loss of Lundy Unit ID 1-2 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2537_P3 Loss of Poole Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2654_P3 Loss of Bishop Creek 2 Unit ID 1 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.87	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_2885_P3 Loss of Bishop Creek 5 Unit ID 1-2 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_375_P3 Loss of Baldy Mesa 1&2 Unit ID 1-3 and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_777_P3 Loss of Aratina 1 (TOT773) Unit ID ALL and DWP Cottonwd-Barren Ridge No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_4991_P6 Loss of Casa Diablo-Control No.1 115 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.69	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_5477_P6 Loss of DWP Inyo-Owenscon No.1 230 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.86	system adjustments after first contingency mitigates the issue
	P6_5568_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Inyo Reactor 220 kV shunt	P6	N-1-1	0.86	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.83	0.9 < V < 1.05	0.86	0.9 < V < 1.05	0.82	system adjustments after first contingency mitigates the issue
	P6_5569_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Control-Casa Diablo line-shunt capacitor 115.0	P6	N-1-1	0.70	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.70	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_5570_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and From OxbowB-OxbowA line-shunt capacitor 230.0	P6	N-1-1	0.72	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.72	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6400_P6 Loss of DWP Inyo-Cottonwd No.1 230 kV line and DWP Cottonwd-Barren Ridge No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.19	0.17	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6453_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Inyo PS No.1 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.84	0.83	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_6454_P6 Loss of DWP Cottonwd-Barren Ridge No.1 230 kV line and Inyo PS No.2 115/230 kV transformer	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.86	0.84	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_108_P3 Loss of All HDPP Units and Victor No.1 115/230 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.12	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_109_P3 Loss of All HDPP Units and Victor No.2 115/230 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.12	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_110_P3 Loss of All HDPP Units and Victor No.3 115/230 kV transformer	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.12	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_1277_P3 Loss of Daggett 3 Unit ID ALL and Victor-Hidesert 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_24_P3 Loss of All HDPP Units and Eldorado-Lugo No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	1.12	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_31_P3 Loss of All HDPP Units and Lugo-Victorville No.1 500 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.15	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_45_P3 Loss of All HDPP Units and Kramer-Victor No.3 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.12	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_458_P3 Loss of Lockhart Unit ID ALL and Victor-Hidesert 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P3_54_P3 Loss of All HDPP Units and Kramer-Twinkle No.1 230 kV line	P3	G-1/N-1	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_1045_P6 Loss of Lugo-Victorville No.1 500 kV line and Victor-Hidesert 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.15	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2111_P6 Loss of Victor-Hidesert 230 kV line and Sandlot-Alba No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_2172_P6 Loss of Victor-Hidesert 230 kV line and Victor Cap 115 kV shunt	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	1.12	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_238_P6 Loss of Eldorado-Lugo No.1 500 kV line and Lugo-Mohave No.1 500 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.14	1.17	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_244_P6 Loss of Eldorado-Lugo No.1 500 kV line and Lugo-Victorville No.1 500 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.16	1.20	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_254_P6 Loss of Eldorado-Lugo No.1 500 kV line and Victor-Hidesert 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.13	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue
	P6_360_P6 Loss of Lugo-Mohave No.1 500 kV line and Lugo-Victorville No.1 500 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.14	1.18	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency (All and Worst P6)	Category	Category Description	Voltage PU (Baseline Scenarios)						Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
	P6_42_P6 Loss of Mojave Solar Project and Coolwater-Silvr_Spmgs No.1 230 kV line	P6	N-1-1	0.9 < V < 1.05	0.9 < V < 1.05	1.11	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	0.9 < V < 1.05	system adjustments after first contingency mitigates the issue

Substation	Contingency	Category	Category Description	Post Cont. Voltage Deviation % (Baseline Scenarios)						Post Cont. Voltage Deviation % (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 Spring OP Sensitivity	
No Voltage Deviations to report													

Contingency	Category	Category Description	Transient Stability Performance									Potential Mitigation Solutions
			Baseline Scenarios						Sensitivity Scenarios			
			2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
Kramer-Sandlot 230 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Coolwater-Sandlot 230 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Kramer-Coolwater 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Kramer-Tortilla 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Kramer-Accelerate 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Accelerate-Tortilla 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Coolwater-Segs 2-Tortilla 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Ivanpah-Baker-Coolwater-Dunn Siding- Mountain Pass 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Kramer-Inyokern-Randsburg No. 1 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Kramer-Inyokern-Randsburg No. 3 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	WECC Criteria Not Met	Unstable	Unstable	No Issues	No Issues	Unstable	No Violation
Inyokern-Searles 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Inyokern-Downs 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Downs-Searles 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Control-Coso-Haiwee-Inyokern 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Control-Haiwee-Inyokern 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Control-Inyo 115 kV TL (Path 60)	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Control-Casa Diablo 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Control-Casa Diablo-Sherwin 115 kV TL	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Control-Silver Peak A 55 kV TL (Path 52)	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Control-Silver Peak C 55 kV TL (Path 52)	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Lugo 1AA or 2AA 500230 kV Transformer Bank	P1	N-1	WECC Criteria Not Met	WECC Criteria Not Met	WECC Criteria Not Met	No Issues	No Issues	No Issues	WECC Criteria Not Met	WECC Criteria Not Met	No Issues	Mohave Desert RAS
Victor 1A, 2A, 3A, or 4A 230115 kV Transformer Bank	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Kramer 1A or 2A 230115 kV Transformer Bank	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Coolwater 1A 230115 kV Transformer Bank	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Control 1B or 2B 11555 kV Transformer Bank	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Inyo - Control 115 kV T/L	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Ivanpah 3A or 4A 230115 kV Transformer Bank	P1	N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Kramer-Victor No. 1 230 kV T/L	P1	N-1	WECC Criteria Not Met	WECC Criteria Not Met	WECC Criteria Not Met	No Issues	WECC Criteria Not Met	WECC Criteria Not Met	WECC Criteria Not Met	WECC Criteria Not Met	WECC Criteria Not Met	Mohave Desert RAS
Kramer-Coolwater 230 kV T/L	P1	N-1	No Issues	No Issues	No Issues	No Issues	WECC Criteria Not Met	WECC Criteria Not Met	No Issues	No Issues	WECC Criteria Not Met	Mohave Desert RAS
Ivanpah-Baker-Coolwater-Dunn Siding- Mountain Pass 115 kV T/L (Coolwater-Dunn Siding Segment)	P2-1	Line Section w/o Fault	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Ivanpah-Baker-Coolwater-Dunn Siding- Mountain Pass 115 kV T/L (Ivanpah-Mountain Pass Segment)	P2-1	Line Section w/o Fault	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
HDPP Units 1, 2, 3 & ST Generation (POI: Victor 230 kV Bus) out of service, and the loss of either Kramer-Victor No. 1 or No.	P3	G-1/N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
HDPP Units 1, 2, 3 & ST Generation (POI: Victor 230 kV Bus) out of service, and the loss of Victor Shunt Capacitor	P3	G-1/N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
DPP Units 1, 2, 3 & ST Generation (POI: Victor 230 kV Bus) out of service, and the loss of either Lugo 500230 kV 1AA or 2AA	P3	G-1/N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
sa Diablo IV Generation (POI: Casa Diablo 115 kV Bus) out of service and the loss of Control-Coso-Haiwee-Inyokern 115 kV	P3	G-1/N-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Lugo - Rancho Vista 500 kV and Lugo - Vincent No. 1 500 kV - SLG 15 cycle fault at Lugo 500	P4	Stuck Breaker	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Lugo - Victorville 500 kV and Lugo - Vincent No.2 500 kV - SLG 15 cycle fault at Lugo 500	P4	Stuck Breaker	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Lugo - Pisgah No. 1 220 kV and Lugo - Victor No. 3 220 kV - SLG 15 cycle fault at Lugo 220	P4	Stuck Breaker	No Issues	WECC Criteria Not Met	No Issues	No Issues	No Issues	No Issues	No Issues	WECC Criteria Not Met	No Issues	Existing High Desert Power Project RAS and Planned Victor CRAS
Lugo - Victor No. 4 220 kV and Lugo 2AA Bank - SLG 15 cycle fault at Lugo 220	P4	Stuck Breaker	WECC Criteria Not Met	WECC Criteria Not Met	No Issues	No Issues	No Issues	No Issues	WECC Criteria Not Met	WECC Criteria Not Met	No Issues	Existing High Desert Power Project RAS and Planned Victor CRAS
Kramer - Tortilla 115 kV and Kramer - Inyokern - Randsburg No. 3 115 kV - SLG 15 cycle fault at Kramer 115	P4	Stuck Breaker	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Kramer - Sandlot 220 kV and Coolwater - Sandlot 220 kV - SLG 15 cycle fault at Sandlot 220	P4	Stuck Breaker	WECC Criteria Not Met	No Issues	No Issues	No Issues	WECC Criteria Not Met	WECC Criteria Not Met	WECC Criteria Not Met	No Issues	WECC Criteria Not Met	Planned Kramer CRAS
Kramer- Victor No. 2 220 kV and Kramer -Coolwater 220 kV - SLG 15 cycle fault at Kramer 220	P4	Stuck Breaker	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Coolwater - Kramer 115 kV and Kramer -Victor 115 kV - SLG 15 cycle fault at Kramer 115	P4	Stuck Breaker	WECC Criteria Not Met	No Issues	No Issues	No Issues	No Issues	No Issues	WECC Criteria Not Met	No Issues	No Issues	Planned Kramer CRAS
Kramer - Sungen 115 kV and Kramer -Roadway 115 kV - SLG 15 cycle fault at Kramer 115	P4	Stuck Breaker	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Control 115 kv East Bus	P5	Non-Redundant Relay	WECC Criteria Not Met				WECC Criteria Not Met		WECC Criteria Not Met		WECC Criteria Not Met	Investigate Options to Add Redundant Relay
Cool Water 115 kv East Bus	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Kramer 115 kv East Bus	P5	Non-Redundant Relay	WECC Criteria Not Met				No Issues		WECC Criteria Not Met		No Issues	Investigate Options to Add Redundant Relay
Tortilla 115 kv East Bus	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Control 55 kV Bus	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Inyokern 115 kv Bus	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.3.13c Kramer 230 kV	P5	Non-Redundant Relay	WECC Criteria Not Met				No Issues		WECC Criteria Not Met		No Issues	Investigate Options to Add Redundant Relay
P5.3.13c Sandlot 230 kV	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.3.13c Victor 230 kV	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.3.13c Control 115 kV	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.3.13c Cool Water 115 kV	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.3.13c Inyokern 115 kV	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.3.13c Kramer 115 kV	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.3.13c Tortilla 115 kV	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.3.13c Victor 115 kV	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.3.13c Cool Water 220 kV	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.3.13c Ivanpah 220 kV	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.3.13c Ivanpah 115 kV	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.3.13c Roadway 115 kV	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.3.13c Control 55 kV	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Kramer - BLM West 220 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Kramer - Cool Water 220 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Kramer - LSP 220 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Kramer - Victor No. 1 220 kV Line	P5	Non-Redundant Relay	WECC Criteria Not Met				No Issues		WECC Criteria Not Met		No Issues	Investigate Options to Add Redundant Relay
Kramer - Victor No. 2 220 kV Line	P5	Non-Redundant Relay	WECC Criteria Not Met				No Issues		WECC Criteria Not Met		No Issues	Investigate Options to Add Redundant Relay
Victor - Lugo No. 1 220 kV Line	P5	Non-Redundant Relay	WECC Criteria Not Met				No Issues		WECC Criteria Not Met		No Issues	Investigate Options to Add Redundant Relay
Victor - Lugo No. 2 220 kV Line	P5	Non-Redundant Relay	WECC Criteria Not Met				No Issues		WECC Criteria Not Met		No Issues	Investigate Options to Add Redundant Relay
Control - Coso - Haiwee - Inyokern 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Control - Haiwee - Inyokern 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Control - Inyo 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Control No. 1 Transformer	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Control No. 3 Transformer	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Control - Sherwin - Casa Diablo 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Control - Casa Diablo 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Cool Water - Baker-Dunn Siding -Ivanpah - Mt. Pass 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Cool Water - Gale 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Cool Water - Kramer 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Cool Water - SEGS - Tortilla 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Cool Water - Tiefort 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Inyo - Control 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Inyokern - Control - Coso - Haiwee 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Inyokern - Control - Haiwee 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Inyokern - Downs 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Inyokern - Kramer - Randsburg No. 1 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Inyokern - Kramer - Randsburg No. 3 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Inyokern - Searles 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Kramer - Cool Water 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Kramer - Inyokern - Randsburg No. 1 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation

Contingency	Category	Category Description	Transient Stability Performance									Potential Mitigation Solutions
			Baseline Scenarios						Sensitivity Scenarios			
			2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	
Kramer - Inyokern - Randsburg No. 3 115 kV Line	P5	Non-Redundant Relay	WECC Criteria Not Met				No Issues		WECC Criteria Not Met		No Issues	Investigate Options to Add Redundant Relay
Kramer - Roadway 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Kramer - Tortilla 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Kramer - Victor 115 kV Line	P5	Non-Redundant Relay	WECC Criteria Not Met				No Issues		WECC Criteria Not Met		No Issues	Investigate Options to Add Redundant Relay
Tortilla - Kramer 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Victor - Kramer 115 kV Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Victor - Roadway 115 kV Line	P5	Non-Redundant Relay	WECC Criteria Not Met				WECC Criteria Not Met		WECC Criteria Not Met		WECC Criteria Not Met	Investigate Options to Add Redundant Relay
P5.b BLM West - Kramer 230 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b BLM West - Kramer 230 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b LUZ LSP - Kramer 230 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b LUZ LSP - Kramer 230 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Coso-Haiwee-Inyokern - Control 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Coso-Haiwee-Inyokern - Control 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Haiwee-Inyokern - Control 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Haiwee-Inyokern - Control 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Colwater - Baker-Dunn Siding-Ivanpah-Mt. Pass 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Colwater - Baker-Dunn Siding-Ivanpah-Mt. Pass 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Kramer - Colwater 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Kramer - Colwater 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Colwater - SEGS-Tortilla 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Colwater - SEGS-Tortilla 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Colwater - Tiefort 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Colwater - Tiefort 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Coso-Haiwee-Control - Inyokern 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Coso-Haiwee-Control - Inyokern 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Haiwee-Control - Inyokern 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Haiwee-Control - Inyokern 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Inyokern - Downs 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Inyokern - Downs 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Kramer-Inyokern-Randsburg No.1 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Kramer-Inyokern-Randsburg No.1 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Kramer-Inyokern-Randsburg No.3 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Kramer-Inyokern-Randsburg No.3 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Inyokern-Searles 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Inyokern-Searles 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Kramer-Roadway 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Kramer-Roadway 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Kramer-Victor 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Kramer-Victor 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Tortilla-Cool Water-SEGS2 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Tortilla-Cool Water-SEGS2 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Kramer-Tortilla 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
P5.b Kramer-Tortilla 115 kv Line	P5	Non-Redundant Relay	No Issues				No Issues		No Issues		No Issues	No Violation
Lugo-Pisgah No. 1 and No. 2 230 kV T/L	P6	N-1-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Calcite-Lugo 230 kV T/L and Lugo-TOT1080 230 kV T/L	P6	N-1-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Lugo 1AA or 2AA 500/230 kV Transformer Bank and Calcite-Lugo 230 kV T/L	P6	N-1-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Lugo 1AA and 2AA 500/230 kV Transformer Bank	P6	N-1-1	Unstable	No Issues	No Issues	No Issues	Unstable	No Issues	Unstable	No Issues	Unstable	Existing High Desert Power Project RAS and Planned Victor CRAS
Coolwater-Segs 2-Tortilla 115 kV T/L and Kramer-Coolwater 230 kV T/L	P6	N-1-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Coolwater 1A 230/115 kV Transformer Bank and Kramer-Accelerate 115 kV T/L	P6	N-1-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Control-Coso-Haiwee-Inyokern 115 kV T/L and Kramer-Inyokern-Randsburg No. 3 115 kV T/L	P6	N-1-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Kramer 1A or 2A 230/115 kV Transformer Bank and Kramer-Victor No. 1 or No. 2 230 kV T/L	P6	N-1-1	WECC Criteria Not Met	No Issues	No Issues	No Issues	No Issues	No Issues	WECC Criteria Not Met	No Issues	No Issues	Mohave Desert RAS with an Option to System Redispatch: Increase generation on the 115 kV system (Kramer, Coolwater, Inyokern, Control)
Kramer-Sandlot 230 kV T/L and Coolwater 1A 230/115 kV Transformer Bank	P6	N-1-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Ivanpah 3A or 4A 230/115 kV Transformer Bank and Coolwater-Sandlot 230 kV T/L	P6	N-1-1	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Kramer-Victor No. 1 and No. 2 230 kV T/L	P6	N-1-1	Unstable	Unstable	No Issues	No Issues	No Issues	Unstable	Unstable	Unstable	No Issues	Mohave Desert RAS
Kramer-Inyokern-Randsburg No. 1 115 kV T/L and Kramer-Inyokern-Randsburg No. 3 115 kV T/L	P6	N-1-1	No Issues	No Issues	No Issues	Unstable	Unstable	Unstable	No Issues	No Issues	Unstable	System Redispatch: Increase generation on the 115 kV system (Kramer, Coolwater, Inyokern, Control)
Control-Inyo 115 kV T/L (Path 60) and Control-Coso-Haiwee-Inyokern 115 kV T/L	P6	N-1-1	No Issues	No Issues	No Issues	Unstable	Unstable	Unstable	No Issues	No Issues	Unstable	System Redispatch: Increase generation on the 115 kV system (Kramer, Coolwater, Inyokern, Control)
Lugo - Victor No. 1 and No. 2 230 kV Lines - SLG 15 cycle fault at Lugo 220	P7	DCTL	WECC Criteria Not Met	No Issues	No Issues	No Issues	No Issues	No Issues	WECC Criteria Not Met	No Issues	No Issues	Existing High Desert Power Project RAS and Planned Victor CRAS
Lugo - Victor No. 3 and No. 4 230 kV Lines - SLG 15 cycle fault at Lugo 220	P7	DCTL	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Kramer - Victor No. 1 and No. 2 230 kV Lines - SLG 15 cycle fault at Kramer 220	P7	DCTL	Unstable	Unstable	No Issues	No Issues	No Issues	Unstable	Unstable	Unstable	No Issues	Mohave Desert RAS
Kramer- Victor 115 kV and Victor - Roadway 115 kV - SLG 15 cycle fault at Victor 115	P7	DCTL	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Victor - Roadway No. 1 and No. 2 115 kV - SLG 15 cycle fault at Victor 115	P7	DCTL	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation
Kramer- Victor 115 kV and Kramer - Roadway 115 kV - SLG 15 cycle fault at Kramer 115	P7	DCTL	WECC Criteria Not Met	No Issues	No Issues	No Issues	No Issues	No Issues	WECC Criteria Not Met	No Issues	No Issues	Mohave Desert RAS
Kramer - Sandlot 230 kV and Kramer - Coolwater 230 kV - SLG 15 cycle fault at Kramer 220	P7	DCTL	Unstable	No Issues	Unstable	No Issues	Unstable	No Issues	Unstable	No Issues	Unstable	No Violation
Coolwater- Sandlot 230 kV and Kramer -Coolwater 230 kV - SLG 15 cycle fault at Coolwater 220	P7	DCTL	No Issues	No Issues	Unstable	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	Planned Kramer CRAS
Control - Coso - Haiwee - Inyokern 115 kV and Control - Haiwee - Inyokern 115 kV - SLG 15 cycle fault at	P7	DCTL	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Issues	No Violation

Worst Contingency	Category	Category Description	Amount of Load Drop (MW)									Potential Mitigation Solutions
			2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 Spring OP Sensitivity	

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

Substation	Load Served (MW)									Potential Mitigation Solutions
	2028 Summer Peak	2031 Summer Peak	2036 Summer Peak	2036 Summer-Off Peak	2028 Spring Off-Peak	2031 Spring Off-Peak	2028 SP Heavy Renewable & Min Gas Gen	2031 SP High CEC Forecast	2028 OP Sensitivity	

No single source substation with more than 100 MW