

Overloaded Facility	Contingency (All and Worst P6)	Category	Category Description	Loading % (Baseline Scenarios)							Loading % (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2025 Summer Peak	2028 Summer Peak	2035 Summer Peak	2035 Winter Peak	2025 Spring Off-Peak	2028 Spring Off-Peak	2035 Spring Off-Peak	2025 SP with Forecasted Load Addition	2028 SP with Forecasted Load Addition	2025 OP BESS Charging	
Amargosa 230/138kV Transformer	Innovation-Desert View 230kV and Trout Canyon-Sloan Canyon 230kV lines	P6	N-1-1	110.86	<100	<100	<100	<100	<100	<100	102.33	<100	Diverge	Short term: Generation redispatch after the first contingency Long term: Previously approved GLW Core Upgrade
Amargosa-Sandy 138kV Line	Trout Canyon-Sloan Canyon 500kV Nos.1&2 lines	P7	DCTL	N/A	<100	101.07	<100	N/A	<100	Divergence	N/A	<100	N/A	Future Trout Canyon RAS, trip 1,450MW installed capacity generation at Trout Canyon 230kV
IS Tap-Northwest 138kV Line	Northwest-Desert View 230kV Nos.1&2 lines	P7	DCTL	N/A	<100	<100	<100	N/A	<100	112.2	N/A	<100	N/A	Future Innovation RAS trip 300MW installed capacity generation at Desert View and Innovation
	Innovation-Desert View 230kV Nos.1&2 lines	P7	DCTL	N/A	<100	<100	<100	N/A	<100	100.3	N/A	<100	N/A	Future Innovation RAS trip 300MW installed capacity generation at Innovation
	Trout Canyon-Sloan Canyon 500kV Nos.1&2 lines	P7	DCTL	N/A	<100	100.2	<100	N/A	<100	Divergence	N/A	<100	N/A	Future Trout Canyon RAS, trip 1,450MW installed capacity generation at Trout Canyon 230kV
	Innovation-Desert View 230kV and Trout Canyon-Sloan Canyon 230kV lines	P6	N-1-1	175.61	<100	<100	<100	<100	<100	<100	163.33	<100	Diverge	Short term: Generation redispatch after the first contingency Long term: Previously approved GLW Core Upgrade
	Pahrump-Vista 138kV line and Innovation 230/138kV transformer	P6	N-1-1	<100	<100	<100	<100	<100	<100	114.77	<100	<100	<100	Generation redispatch after the first contingency
VEA PST-IS Tap 138kV Line	Northwest-Desert View 230kV Nos.1&2 lines	P7	DCTL	N/A	<100	<100	<100	N/A	<100	118.71	N/A	<100	N/A	Future Innovation RAS trip 300MW installed capacity generation at Desert View and Innovation
	Innovation-Desert View 230kV Nos.1&2 lines	P7	DCTL	N/A	<100	<100	<100	N/A	<100	106.84	N/A	<100	N/A	Future Innovation RAS trip 300MW installed capacity generation at Innovation
	Trout Canyon-Sloan Canyon 500kV Nos.1&2 lines	P7	DCTL	N/A	<100	108.48	<100	N/A	<100	Divergence	N/A	<100	N/A	Future Trout Canyon RAS, trip 1,450MW installed capacity generation at Trout Canyon 230kV
	Pahrump-Vista 138kV line and Innovation 230/138kV transformer	P6	N-1-1	N/A	<100	<100	<100	N/A	<100	120.9	N/A	<100	N/A	Short term: Generation redispatch after the first contingency Long term: Previously approved GLW Core Upgrade
Remaining Pahrump 230/138kV Transformer	One Pahrump 230/138kV transformer and Gamebird 230/138kV transformer	P6	N-1-1	<100	<100	120.53	<100	<100	<100	<100	<100	<100	<100	Existing UVLS scheme
Gamebird 230/138kV Transformer	Pahrump-Gamebird 230kV and Trout Canyon-Sloan Canyon 230kV lines	P6	N-1-1	132.01	<100	<100	<100	<100	<100	<100	131.98	<100	<100	Short term: Generation redispatch after the first contingency Long term: Previously approved GLW Core Upgrade
Gamebird-Pahrump 138kV Line	Pahrump-Gamebird 230kV and Trout Canyon-Sloan Canyon 230kV lines	P6	N-1-1	109.4	<100	<100	<100	<100	<100	<100	106.32	<100	<100	Short term: Generation redispatch after the first contingency Long term: Previously approved GLW Core Upgrade
Sloan Canyon 500/230kV Transformer	Sloan Canyon-Eldorado 500kV and Sloan Canyon-Harry Allen 500kV lines	P6	N-1-1	N/A	<100	<100	<100	N/A	<100	104.22	N/A	<100	N/A	Generation redispatch after the first contingency
Remaining Trout Canyon 500/230kV Transformer	Loss of the other two Trout Canyon 500/230kV transformers	P6	N-1-1	N/A	<100	<100	<100	N/A	<100	106.35	N/A	<100	N/A	Generation redispatch after the first contingency

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Substation	Contingency (All and Worst P6)	Category	Category Description	Post Cont. Voltage Deviation % (Baseline Scenarios)							Post Cont. Voltage Deviation % (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2025 Summer Peak	2028 Summer Peak	2035 Summer Peak	2035 Winter Peak	2025 Spring Off-Peak	2028 Spring Off-Peak	2035 Spring Off-Peak	2025 SP with Forecasted Load Addition	2028 SP with Forecasted Load Addition	2025 OP BESS Charging	

No P1 or P3 contingencies resulted in voltage deviation greater than 8%

Contingency	Category	Category Description	Transient Stability Performance					Potential Mitigation Solutions
			Baseline Scenarios			Sensitivity Scenarios		
			2028 Summer Peak	2035 Summer Peak	2025 Spring Off-Peak	2028 SP with Forecasted Load Addition	2025 OP BESS Charging	
Amargosa-Sandy 138kV (fault at Amargosa)	P1	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Pahrump-Vista 138kV (fault at Pahrump)	P1	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Pahrump-Gamebird 138kV (fault at Pahrump)	P1	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Vista-Johnnie-Valley 138kV (fault at Vista)	P1	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Vista-Johnnie 230kV (fault at Vista)	P1	Normal clearing	Stable/WECC criteria met	Unstable	N/A	Stable/WECC criteria met	N/A	Under review with PTO
Vista-Pahrump 230kV (fault at Vista)	P1	Normal clearing	Stable/WECC criteria met	Unstable	N/A	Stable/WECC criteria met	N/A	Under review with PTO
Lathrop Wells-Valley TP 230kV (fault at Lathrop Wells)	P1	Normal clearing	Stable/WECC criteria met	Unstable	N/A	Stable/WECC criteria met	N/A	Under review with PTO
Lathrop Wells 138kV bus fault	P1	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Sandy 138kV bus fault	P1	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Valley 138kV bus fault	P1	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Valley Switch 138kV bus fault	P1	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Gamebird-Sandy & Thousandaire-Gamebird 138kV	P6	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Gamebird-Pahrump 138kV & Gamebird 230/138kV transformer	P6	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Pahrump-Innovation & Pahrump-Gamebird 230kV	P6	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Nwest-Desert View & Pahrump-Gamebird 230kV	P6	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Sloan Canyon-Eldorado & Sloan Canyon-Mead 230kV	P6	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Pahrump-Vista 138kV & Pahrump-Gamebird 138kV	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Pahrump 230/138kV No.2 & Pahrump-Vista 138kV	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Pahrump 230/138kV No.1 & Pahrump-Gamebird 138kV	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Pahrump 230/138kV No.1 & Pahrump-Gamebird 230kV	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Pahrump 230/138kV No.2 & Pahrump-Vista 230kV	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Pahrump-Gamebird 230kV No.2 & Trout Canyon-Gamebird 230kV No.2	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	Stable/WECC criteria met	No Issues
Sloan Canyon 500/230kV transformer & Sloan Canyon-Eldorado 230kV	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Innovation-Desert View 230kV No.1 & Innovation 230/138kV transformer	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Innovation-Johnnie 230kV No.1 & Innovation 230/138kV transformer	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Sloan Canyon-Eldorado 500kV & Trout Canyon-Sloan Canyon 500kV No.1	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Sloan Canyon-Harry Allen 500kV & Trout Canyon-Sloan Canyon 500kV No.2	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Trout Canyon 500/230kV No.1&Trout Canyon-Sloan Canyon 500kV No.1	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Trout Canyon 500/230kV No.2 & Trout Canyon-Gamebird 230kV No.2	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Johnnie-Pahrump 230kV & Johnnie-Innovation 230kV	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Johnnie-Vista 230kV & Johnnie-Valley TP 230kV	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Valley TP-Lathrop Wells 230kV & Valley TP-Johnnie 230kV	P4.2	Stuck breaker	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Pahrump-Gamebird 230kV Nos.1&2	P7	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Innovation-Desert View 230kV Nos.1&2	P7	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Trout Canyon-Sloan Canyon 500kV Nos.1&2	P7	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Trout Canyon-Gamebird 230kV Nos.1&2	P7	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Desert View-Northwest 230kV Nos.1&2	P7	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Innovation-Johnnie 230kV Nos.1&2	P7	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Valley TP-Johnnie 230kV Nos.1&2	P7	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Valley TP-Lathrop Wells 230kV Nos.1&2	P7	Normal clearing	Stable/WECC criteria met	Stable/WECC criteria met	N/A	Stable/WECC criteria met	N/A	No Issues
Pahrump-Gamebird 230kV & Pahrump-Gamebird 138kV	P7	Normal clearing	N/A	N/A	Stable/WECC criteria met	N/A	Stable/WECC criteria met	No Issues
Pahrump-Gamebird 230kV & Gamebird-Sandy 138kV	P7	Normal clearing	N/A	N/A	Stable/WECC criteria met	N/A	Stable/WECC criteria met	No Issues
Pahrump-Innovation 230kV & Pahrump-Vista 138kV	P7	Normal clearing	N/A	N/A	Stable/WECC criteria met	N/A	Stable/WECC criteria met	No Issues
Pahrump-Innovation 230kV & Vista-ValleySS 138kV	P7	Normal clearing	N/A	N/A	Stable/WECC criteria met	N/A	Stable/WECC criteria met	No Issues
Desert View 230kV	P5	Non-redundant Relay	N/A	N/A	Stable/WECC criteria met	N/A	Stable/WECC criteria met	No Issues

Worst Contingency	Category	Category Description	Amount of Load Drop (MW)										Potential Mitigation Solutions
			2025 Summer Peak	2028 Summer Peak	2035 Summer Peak	2035 Winter Peak	2025 Spring Off-Peak	2028 Spring Off-Peak	2035 Spring Off-Peak	2025 SP with Forecasted Load Addition	2028 SP with Forecasted Load Addition	2025 OP BESS Charging	

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

Substation	Load Served (MW)										Potential Mitigation Solutions
	2025 Summer Peak	2028 Summer Peak	2035 Summer Peak	2035 Winter Peak	2025 Spring Off-Peak	2028 Spring Off-Peak	2035 Spring Off-Peak	2025 SP with Forecasted Load Addition	2028 SP with Forecasted Load Addition	2025 OP BESS Charging	

No single source substation with more than 100 MW