



Overloaded Facility	Contingency (All and Worst P6)	Category	Category Description	Loading % (Baseline Scenarios)						Loading % (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2024 Summer Peak	2027 Summer Peak	2032 Summer Peak	2024 Spring Off-Peak	2027 Spring Off-Peak	2032 Spring Off-Peak	2024 SP High Forecasted Load	2027 SP High Forecasted Load	2024 OP Heavy Renewable Output	
18003 AMARGOSA 230 189001 AMARGOSA 138 1 1	line_1_Line NWest 230.0 to DESERT VIEW 230.0 Circuit 1 AND line_32_Line TROUT CANYON 230.0 to SLOAN CANYON 230.0 Circuit 1	P6	N-1-1	< 100	116.6	< 100	< 100	140.2	< 100	< 100	133.3	< 100	Short term: Sloan Canyon RAS and existing UVLS Long term: GLW Upgrade
	line_18_Line INNOVATION 230.0 to DESERT VIEW 230.0 Circuit 1 AND line_23_Line GAMEBIRD 230.0 to TROUT CANYON 230.0 Circuit 1	P6	N-1-1	108.2	145.4	< 100	< 100	< 100	< 100	121.1	166.6	< 100	Short term: existing UVLS Long term: GLW Upgrade
18073 IS TAP 138 189101 MERCRYSW 138 1 1	line_1_Line NWest 230.0 to DESERT VIEW 230.0 Circuit 1 AND line_23_Line GAMEBIRD 230.0 to TROUT CANYON 230.0 Circuit 1	P6	N-1-1	< 100	139.4	< 100	< 100	< 100	< 100	112.7	165.2	< 100	Short term: existing UVLS Long term: GLW Upgrade
	line_18_Line INNOVATION 230.0 to DESERT VIEW 230.0 Circuit 1 AND line_11_Line PAHRUMP 138.0 to VISTA 138.0 Circuit 1	P6	N-1-1	< 100	< 100	< 100	< 100	114.9	< 100	< 100	< 100	< 100	Generation redispatch following the first contingency
	line_32_Line TROUT CANYON 230.0 to SLOAN CANYON 230.0 Circuit 1 AND line_18_Line INNOVATION 230.0 to DESERT VIEW 230.0 Circuit 1	P6	N-1-1	< 100	106.3	< 100	< 100	210.2	< 100	< 100	124.9	< 100	Short term: Sloan Canyon RAS and existing UVLS Long term: GLW Upgrade
189000 PAHRUMP 230 189007 PAHRUMP 138 1 1	tran_37_Tran GAMEBIRD 230.00 to GAMEBIRD 138.00 Circuit 1 0.00 AND tran_35_Tran PAHRUMP 230.00 to PAHRUMP 138.00 Circuit 2 0.00	P6	N-1-1	< 100	< 100	106.6	< 100	< 100	< 100	< 100	109.4	< 100	UVLS Rely on 30 minutes emergency rating
189000 PAHRUMP 230 189007 PAHRUMP 138 2 1	tran_37_Tran GAMEBIRD 230.00 to GAMEBIRD 138.00 Circuit 1 0.00 AND tran_34_Tran PAHRUMP 230.00 to PAHRUMP 138.00 Circuit 1 0.00	P6	N-1-1	< 100	< 100	101.9	< 100	< 100	< 100	< 100	107.7	< 100	UVLS Rely on 30 minutes emergency rating
189001 AMARGOSA 138 189008 SANDY 138 1 1	line_18_Line INNOVATION 230.0 to DESERT VIEW 230.0 Circuit 1 AND line_23_Line GAMEBIRD 230.0 to TROUT CANYON 230.0 Circuit 1	P6	N-1-1	< 100	103.7	< 100	< 100	< 100	< 100	< 100	119.5	< 100	Short term: existing UVLS Long term: GLW Upgrade
	line_32_Line TROUT CANYON 230.0 to SLOAN CANYON 230.0 Circuit 1 AND line_5_Line PAHRUMP 230.0 to INNOVATION 230.0 Circuit 1	P6	N-1-1	< 100	< 100	< 100	< 100	110.5	< 100	< 100	< 100	< 100	Sloan Canyon RAS
189016 INNOVATION 230 189021 DESERT VIEW 230 1 1	gen_54_Gen TROUT CANYON 230.0 Unit ID VE AND line_35_Line INNOVATION 230.0 to DESERT VIEW 230.0 Circuit 2	P3	G-1/N-1	< 100	< 100	< 100	< 100	< 100	103.8	< 100	< 100	< 100	Generation redispatch following the first contingency
	line_31_Line TROUT CANYON 230.0 to SLOAN CANYON 230.0 Circuit 1 AND line_35_Line INNOVATION 230.0 to DESERT VIEW 230.0 Circuit 2	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	104.2	< 100	< 100	< 100	Generation redispatch following the first contingency
189020 GAMEBIRD 138 189007 PAHRUMP 138 1 1	line_6_Line PAHRUMP 230.0 to GAMEBIRD 230.0 Circuit 1 AND line_32_Line TROUT CANYON 230.0 to SLOAN CANYON 230.0 Circuit 1	P6	N-1-1	< 100	< 100	< 100	< 100	102.6	< 100	< 100	< 100	< 100	Sloan Canyon RAS
189043 GAMEBIRD 230 189020 GAMEBIRD 138 1 1	line_32_Line TROUT CANYON 230.0 to SLOAN CANYON 230.0 Circuit 1 AND line_6_Line PAHRUMP 230.0 to GAMEBIRD 230.0 Circuit 1	P6	N-1-1	< 100	< 100	< 100	< 100	124.3	< 100	< 100	< 100	< 100	Sloan Canyon RAS
189043 GAMEBIRD 230 189160 TROUT CANYON 230 1 1	line_3_Line MEAD S 230.0 to SLOAN CANYON 230.0 Circuit 1 AND P1-3-16_Eldorado2 230/500-kV Tran Bnk 5	P6	N-1-1	NotConv	116.1	< 100	< 100	NotConv	< 100	NotConv	116.9	NotConv	Short term: Ivanpah RAS and congestion management Long term: GLW Upgrade



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				2024 Summer Peak	2027 Summer Peak	2032 Summer Peak	2024 Spring Off-Peak	2027 Spring Off-Peak	2032 Spring Off-Peak	2024 SP High Forecasted Load	2027 SP High Forecasted Load	2024 OP Heavy Renewable Output	
189100 JACKASSF 138 189101 MERCYSW 138 1 1	line_14_Line VALLEYTP 138.0 to LTHRPWLS 138.0 Circuit 1	P1	N-1	< 100	< 100	106.8	< 100	< 100	< 100	< 100	< 100	< 100	New RAS to trip generation at Beatty Substation Transmission upgrade will be further evaluated in Policy Study
	line_16_Line VALLEYTP 138.0 to VISTA 138.0 Circuit 1 AND line_24_Line JACKASSF 138.0 to STOCK-WASH 138.0 Circuit 1	P6	N-1-1	< 100	< 100	117.1	< 100	< 100	110.6	< 100	< 100	< 100	Generation redispatch following the first contingency
	line_24_Line JACKASSF 138.0 to STOCK-WASH 138.0 Circuit 1 AND line_11_Line PAHRUMP 138.0 to VISTA 138.0 Circuit 1	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	126.1	< 100	< 100	< 100	Generation redispatch following the first contingency
	line_31_Line TROUT CANYON 230.0 to SLOAN CANYON 230.0 Circuit 1 AND line_5_Line PAHRUMP 230.0 to INNOVATION 230.0 Circuit 1	P6	N-1-1	< 100	< 100	< 100	< 100	123.0	101.2	< 100	< 100	< 100	Generation redispatch following the first contingency
	P1-3-16_Eldorado2 230/500-kV Tran Bnk 5 AND line_3_Line MEAD S 230.0 to SLOAN CANYON 230.0 Circuit 1	P6	N-1-1	< 100	< 100	< 100	< 100	NotConv	< 100	< 100	< 100	NotConv	Ivanpah RAS and Congestion management
	P4-2-3_VALLEYTP-LTHRPWLS 138 & VALLEYTP-VALLEYVE 138 & VALLEYTP-JOHNIE 138	P4	Stuck breaker	< 100	< 100	106.8	< 100	< 100	< 100	< 100	< 100	< 100	New RAS to trip generation at Beatty Substation Transmission upgrade will be further evaluated in Policy Study
	P5-1-21_VALLEYTP SUBSTATION 138-kV	P5	Non-redundant Relay	< 100	< 100	106.8	< 100	< 100	< 100	< 100	< 100	< 100	Install redundant relay New RAS to trip generation at Beatty Substation Transmission upgrade will be further evaluated in Policy Study
STOCKWASH - VALLEY_NTS - TWEEZER - FRENCH FLAT - MERC DIST - MERCURY SW 138	line_11_Line PAHRUMP 138.0 to VISTA 138.0 Circuit 1 AND line_23_Line JACKASSF 138.0 to MERCYSW 138.0 Circuit 1	P6	N-1-1	< 100	< 100	< 100	< 100	< 100	128.9	< 100	< 100	< 100	Generation redispatch following the first contingency
	line_23_Line JACKASSF 138.0 to MERCYSW 138.0 Circuit 1 AND line_14_Line VALLEYTP 138.0 to LTHRPWLS 138.0 Circuit 1	P6	N-1-1	< 100	< 100	136.2	< 100	< 100	< 100	< 100	< 100	< 100	Generation redispatch following the first contingency
	line_23_Line JACKASSF 138.0 to MERCYSW 138.0 Circuit 1 AND line_16_Line VALLEYTP 138.0 to VISTA 138.0 Circuit 1	P6	N-1-1	< 100	< 100	117.8	< 100	< 100	114.9	< 100	< 100	< 100	Generation redispatch following the first contingency
189160 TROUT CANYON 230 189040 SLOAN CANYON 230 1 1	line_3_Line MEAD S 230.0 to SLOAN CANYON 230.0 Circuit 1 AND P1-3-16_Eldorado2 230/500-kV Tran Bnk 5	P6	N-1-1	NotConv	106.8	< 100	< 100	NotConv	< 100	NotConv	107.5	NotConv	Short term: Ivanpah RAS and congestion management Long term: GLW Upgrade
18073 IS TAP 138 18091 RADAR 138 1 1	NWEST 230.0 to DESERT VIEW 230.0 Circuit 1 and 2	P7	DCTL	N/A	N/A	105.4	N/A	N/A	105.4	N/A	N/A	N/A	Innovation RAS Upgrade will be further evaluated in Policy Study

2022-2023 ISO Reliability Assessment - Study Results

Study Area: Valley Electric Association

Voltage Deviation

[illegible]

No voltage deviation greater than 8% following P1 and P3 contingencies

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Study Area: Valley Electric Association



Single Contingency Load Drop

Worst Contingency	Category	Category Description	Amount of Load Drop (MW)									Potential Mitigation Solutions
			2024 Summer Peak	2027 Summer Peak	2032 Summer Peak	2024 Spring Off-Peak	2027 Spring Off-Peak	2032 Spring Off-Peak	2024 SP High Forecasted Load	2027 SP High Forecasted Load	2024 OP Heavy Renewable Output	

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

Study Area: **Valley Electric Association**



Single Source Substation with more than 100 MW Load

Substation	Load Served (MW)									Potential Mitigation Solutions
	2024 Summer Peak	2027 Summer Peak	2032 Summer Peak	2024 Spring Off-Peak	2027 Spring Off-Peak	2032 Spring Off-Peak	2024 SP High Forecasted Load	2027 SP High Forecasted Load	2024 OP Heavy Renewable Output	

No single source substation with more than 100 MW