

Monitored Facility	Contingency Description	Category	Category Description	2026HS	2029HS	2034HS	2039HS	2026SPOP	2029SPOP	2034SPOP	2039SPOP	2049WC P	2026HS-Hi Renew MinGas	2026 SOP Hi Renew & MinGas	2029HS-HICC	Project & Potential Mitigation
30060 MIDWAY 500 24595 MN WRLWIND 31 500 3 1	Base Case	P0	base	<100	<100	<100	<100	<100	<100	<100	101	<100	<100	<100	<100	System redesign
30435 LAKEVILLE 230 30460 VACA-DIX 230 1 1	Base Case	P0	base	<100	<100	<100	103	<100	<100	<100	<100	<100	<100	<100	<100	Continue to monitor
30440 TULLCAY 230 30460 VACA-DIX 230 55 1	Base Case	P0	base	<100	<100	<100	109	<100	<100	<100	<100	<100	<100	<100	<100	Continue to monitor
38605 BUENAVIZ 230 30969 MIDWAY-D8AAH 230 2 1	Base Case	P0	base	<100	<100	<100	<100	<100	<100	<100	<100	<100	60	108	<100	Sensitivity Only
300151 TM_VD_11 500 300152 TM_VD_12 500 1 1	Base Case	P0	base	<100	<100	<100	78	<100	<100	<100	<100	<100	100	74	<100	Sensitivity Only
300051 RM_FR_11 500 30060 FERNROADSS 500 1 1	P1-2-AD-5: ROUND MTN-FERNROADSS 500KV 2[0]	P1	L-1	<100	<100	<100	104	<100	<100	<100	76	<100	109	78	<100	Previously recommended N-1 RAS
300053 FR_TM_22 500 30060 FERNROADSS 500 2 1	P1-2-AD-4: ROUND MTN-FERNROADSS 500KV 1[0]	P1	L-1	<100	<100	<100	<100	<100	<100	<100	76	<100	109	78	<100	Sensitivity Only
300053 RM_FR_22 500 30060 FERNROADSS 500 2 1	P1-2-AD-4: ROUND MTN-FERNROADSS 500KV 1[0]	P1	L-1	<100	<100	<100	104	<100	<100	<100	<100	<100	<100	<100	<100	Previously recommended N-1 RAS
30050 LOSBANOS 500 300505 LB_MN_11 500 1 1	P1-2-AD-18: LOSBANOS-MANNING 500KV 2[0]	P1	L-1	<100	<100	<100	<100	<100	<100	<100	100	<100	<100	<100	<100	System redesign
30052 MANNING 500 300501 MN_GT_11 500 1 1	P1-2-AD-29: MIDWAY-MANNING 500KV [0]	P1	L-1	<100	<100	<100	<100	<100	<100	<100	100	<100	<100	<100	<100	System redesign
30731 LS ESTRS 230 38901 SSS 230 1 1	P1-5-AD-6: NEWARK-NRS POLE 2	P1	L-1	<100	<100	<100	118	<100	<100	<100	100	<100	<100	<100	<100	Mitigation in GBA local area assessment
300151 TM_VD_11 500 300152 TM_VD_12 500 1 1	P1-2-AD-7: TABLE MTN-TESLA 500KV [6080]	P1	L-1	<100	<100	<100	74	<100	<100	<100	<100	<100	104	79	<100	Sensitivity Only
300153 TM_TS_11 500 300154 TM_TS_12 500 1 1	P1-2-AD-6: TABLE MTN-VACA 500KV [6090]	P1	L-1	<100	<100	<100	69	<100	<100	<100	<100	<100	104	81	<100	Sensitivity Only
300551 GT_MW_11 500 30060 MIDWAY 500 1 1	P1-2-AD-29: MIDWAY-MANNING 500KV [0]	P1	L-1	<100	<100	<100	<100	<100	<100	<100	101	<100	<100	<100	<100	System redesign
300051 RM_FR_11 500 30060 FERNROADSS 500 1 1	P1-2-AD-20: ROUND MTN-FERN RD #2 500KV [9502] (RM_FR_22-FERNROADSS)	P2	bus-bkr	<100	<100	<100	<100	<100	<100	<100	<100	<100	109	<100	<100	Sensitivity Only
300053 RM_FR_11 500 30060 FERNROADSS 500 1 1	P1-2-AD-5: ROUND MTN-FERN RD #2 500KV [9502] (ROUND MT-RM_FR_22)	P2	bus-bkr	<100	<100	<100	104	<100	<100	<100	<100	<100	<100	78	<100	Previously recommended N-1 RAS
300053 FR_TM_22 500 30060 FERNROADSS 500 2 1	P1-2-AD-18: ROUND MTN-FERN RD #1 500KV [9501] (RM_FR_11-FERNROADSS)	P2	bus-bkr	<100	<100	<100	<100	<100	<100	<100	76	<100	109	<100	<100	Sensitivity Only
300053 RM_FR_22 500 30060 FERNROADSS 500 2 1	P1-2-AD-4: ROUND MTN-FERN RD #1 500KV [9501] (ROUND MT-RM_FR_11)	P2	bus-bkr	<100	<100	<100	104	<100	<100	<100	<100	<100	<100	<100	<100	Previously recommended N-1 RAS
30040 TESLA 500 38856 TESLA 6M 13.8 6 1	P2-3-AD-17: TESLA 500KV - Middle Breaker Bay 3	P2	bus-bkr	<100	<100	<100	93	<100	<100	<100	<100	<100	108	56	<100	Sensitivity Only
30050 LOSBANOS 500 300505 LB_MN_11 500 1 1	P2-3-AD-28: LOSBANOS 500KV - Middle Breaker Bay 2	P2	bus-bkr	<100	<100	<100	<100	<100	<100	<100	104	<100	<100	<100	<100	System redesign
30050 LOSBANOS 500 300506 LB_MN_21 500 2 1	P2-1-AD-11: LOSBANOS-MANNING #1 500KV [9506] (LOSBANOS-LB_MN_11)	P2	bus-bkr	<100	<100	<100	<100	<100	<100	<100	100	<100	<100	<100	<100	System redesign
30052 MANNING 500 300501 MN_GT_11 500 1 1	P2-3-AD-5: MANNING 500KV - Middle Breaker Bay 3	P2	bus-bkr	<100	<100	<100	<100	<100	<100	<100	101	<100	<100	<100	<100	System redesign
30052 MANNING 500 300502 MN_MW_21 500 2 1	P2-3-AD-33: GATES 500KV - Middle Breaker Bay 4	P2	bus-bkr	<100	<100	<100	<100	<100	<100	<100	102	<100	<100	<100	<100	System redesign
30640 TESLA C 230 30655 PRASCTT 230 2 1	P2-3-AD-17: TESLA 500KV - Middle Breaker Bay 3	P2	bus-bkr	<100	<100	<100	103	<100	<100	<100	<100	<100	59	<100	<100	Continue to monitor
30640 TESLA C 230 38856 TESLA 6M 13.8 6 1	P2-3-AD-17: TESLA 500KV - Middle Breaker Bay 3	P2	bus-bkr	<100	<100	<100	92	<100	<100	<100	<100	<100	107	55	<100	Sensitivity Only
300151 TM_VD_11 500 300152 TM_VD_12 500 1 1	P2-3-AD-16: TESLA 500KV - Middle Breaker Bay 1	P2	bus-bkr	<100	<100	<100	78	<100	<100	<100	<100	<100	111	82	<100	Sensitivity Only
300153 TM_TS_11 500 300154 TM_TS_12 500 1 1	P2-3-AD-8: VACA-DIX 500KV - Middle Breaker Bay 3	P2	bus-bkr	<100	<100	<100	<100	<100	<100	<100	<100	<100	104	82	<100	Sensitivity Only
300504 MN_MW_23 500 30060 MIDWAY 500 2 1	P2-3-AD-33: GATES 500KV - Middle Breaker Bay 4	P2	bus-bkr	<100	<100	<100	<100	<100	<100	<100	104	<100	<100	<100	<100	System redesign
300551 GT_MW_11 500 30060 MIDWAY 500 1 1	P2-1-AD-40: MIDWAY-MANNING 500KV [9508] (MANNING-MN_MW_21)	P2	relay	<100	<100	<100	<100	<100	<100	<100	101	<100	<100	<100	<100	System redesign
30040 TESLA 500 38856 TESLA 6M 13.8 6 1	P5-5(DC)AD-8: Station DC Battery Supply Metcalf 500-230KV Batt	P5	relay	<100	<100	<100	0	<100	<100	<100	<100	<100	119	67	<100	Sensitivity Only
30050 LOSBANOS 500 300502 LB_MW_11 500 1 1	P5-5(DC)AD-7: Station DC Battery Supply Midway 500KV Batt	P5	relay	<100	<100	<100	<100	<100	<100	<100	<100	<100	106	61	<100	Sensitivity Only
30052 MANNING 500 300502 MN_MW_21 500 2 1	P5-5(DC)AD-6: Station DC Battery Supply Gates 500KV Batt	P5	relay	<100	<100	<100	<100	<100	<100	<100	126	<100	<100	<100	<100	System redesign
30055 GATES 500 34657 GATES12M 13.8 12 1	P5-5(DC)AD-7: Station DC Battery Supply Midway 500KV Batt	P5	relay	<100	<100	<100	<100	<100	<100	<100	0	<100	102	<100	<100	Sensitivity Only
30105 COTWD_E 230 30245 ROUND MT 230 3 1	P5-5(DC)AD-2: Station DC Battery Supply Table Mtn 500-230-115-60KV Batt	P5	relay	<100	<100	<100	<100	<100	<100	<100	<100	0	101	<100	<100	Sensitivity Only
30348 BRIGHTON 230 30500 BELLOTA 230 1 1	P5-5(DC)AD-4: Station DC Battery Supply Tesla 500KV Batt	P5	relay	<100	<100	<100	<100	<100	<100	<100	<100	<100	104	77	<100	Sensitivity Only
30435 LAKEVILLE 230 30460 VACA-DIX 230 1 1	P5-5(DC)AD-4: Station DC Battery Supply Tesla 500KV Batt	P5	relay	<100	<100	<100	110	<100	<100	<100	<100	<100	86	63	<100	Install redundant battery supply
30440 TULLCAY 230 30460 VACA-DIX 230 55 1	P5-5(DC)AD-4: Station DC Battery Supply Tesla 500KV Batt	P5	relay	<100	<100	<100	105	<100	<100	<100	<100	<100	<100	<100	<100	Install redundant battery supply
30460 VACA-DIX 230 30465 BAHIA 230 1 1	P5-5(DC)AD-4: Station DC Battery Supply Tesla 500KV Batt	P5	relay	<100	<100	<100	100	<100	<100	<100	<100	<100	124	84	<100	Sensitivity Only
30460 VACA-DIX 230 30467 PARKWAY 230 1 1	P5-5(DC)AD-4: Station DC Battery Supply Tesla 500KV Batt	P5	relay	<100	<100	<100	100	<100	<100	<100	<100	<100	127	84	<100	Sensitivity Only
30465 BAHIA 230 30550 MORAGA 230 1 1	P5-5(DC)AD-4: Station DC Battery Supply Tesla 500KV Batt	P5	relay	<100	<100	<100	87	<100	<100	<100	<100	<100	124	77	<100	Sensitivity Only
30467 PARKWAY 230 30550 MORAGA 230 1 1	P5-5(DC)AD-4: Station DC Battery Supply Tesla 500KV Batt	P5	relay	<100	<100	<100	88	<100	<100	<100	<100	<100	120	78	<100	Sensitivity Only
30515 WARNERVL 230 30516 WILSONRCTR 230 1 1	P5-5(DC)AD-5: Station DC Battery Supply Los Banos 500-230-70KV Batt	P5	relay	<100	<100	<100	100	<100	<100	<100	0	<100	66	146	<100	Install redundant battery supply
30516 WILSONRCTR 230 30800 WILSON 230 4 1	P5-5(DC)AD-5: Station DC Battery Supply Los Banos 500-230-70KV Batt	P5	relay	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	144	<100	Sensitivity Only
30550 MORAGA 230 30554 CASTROVL 230 1 1	P5-5(DC)AD-4: Station DC Battery Supply Tesla 500KV Batt	P5	relay	<100	<100	<100	123	<100	<100	<100	<100	<100	130	134	<100	Install redundant battery supply
30554 CASTROVL 230 30631 NEWARK E 230 1 1	P5-5(DC)AD-4: Station DC Battery Supply Tesla 500KV Batt	P5	relay	<100	<100	<100	111	<100	<100	<100	<100	<100	148	150	<100	Install redundant battery supply
30565 BRENTWOOD 230 30569 KELSO 230 1 1	P5-5(DC)AD-4: Station DC Battery Supply Tesla 500KV Batt	P5	relay	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	105	<100	Sensitivity Only
30574 WINDMASTERIT 230 38610 DELTAPMP 230 1 1	P5-5(DC)AD-4: Station DC Battery Supply Tesla 500KV Batt	P5	relay	<100	<100	<100	<100	<100	<100	<100	<100	<100	82	160	<100	Sensitivity Only
30580 SANDHILWICT 230 30625 TESLA D 230 1 1	P5-5(DC)AD-4: Station DC Battery Supply Tesla 500KV Batt	P5	relay	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	103	<100	Sensitivity Only
30590 USWP-JRW ICT 230 30530 CAVETANO 230 1 1	P5-5(DC)AD-4: Station DC Battery Supply Tesla 500KV Batt	P5	relay	<100	<100	<100	105	<100	<100	<100	<100	<100	<100	<100	<100	Install redundant battery supply
30624 TESLA E 230 30670 WESTLEY 230 1 1	P5-5(DC)AD-4: Station DC Battery Supply Tesla 500KV Batt	P5	relay	<100	<100	<100	105	<100	<100	<100	68	<100	<100	<100	<100	Install redundant battery supply
30631 NEWARK E 230 30635 NWK DIST 230 1 1	P5-5(DC)AD-8: Station DC Battery Supply Metcalf 500-230KV Batt	P5	relay	<100	<100	<100	0	<100	<100	<100	55	<100	104	70	<100	Sensitivity Only
30635 NWK DIST 230 30731 LS ESTRS 230 1 1	P5-5(DC)AD-8: Station DC Battery Supply Metcalf 500-230KV Batt	P5	relay	<100	<100	<100	0	<100	<100	<100	54	<100	106	73	<100	Sensitivity Only
30635 NWK DIST 230 30731 LS ESTRS 230 2 1	P5-5(DC)AD-8: Station DC Battery Supply Metcalf 500-230KV Batt	P5	relay	<100	<100	<100	0	<100	<100	<100	51	<100	100	69	<100	Sensitivity Only
30635 NWK DIST 230 30731 LS ESTRS 230 3 1	P5-5(DC)AD-8: Station DC Battery Supply Metcalf 500-230KV Batt	P5	relay	<100	<100	<100	0	<100	<100	<100	51	<100</				

2024-2025 ISO Reliability Assessment - Preliminary Study Results

Study Area: **PG&E Bulk**

Low Voltages

Substation	Contingency (All and Worst F)	Category	Category Description	Voltage PU (Baseline Scenarios)									Voltage PU (Sensitivity Scenarios)			Project & Potential Mitigation Solutions
				2026 Summer Peak	2029 Summer Peak	2034 Summer Peak	2039 Summer Peak	2026 Spring Off Peak	2029 Spring Off Peak	2034 Spring Off Peak	2039 Spring Off Peak	2034 Winter Off- Peak	2026 SP Heavy Renewable	2026 SOP Heavy Renewable & Min Gas Gen	2029 SP High CEC Forecast	
NONE detected on Bulk System																

2024-2025 ISO Reliability Assessment - Preliminary Study Results

Study Area: **PG&E Bulk**

Single Contingency Load Drop

Substation	Contingency (All and	Category	Category Description	Amount of Load Drop (MW)									Amount of Load Drop (Sensitivity Scenarios)			Project & Potential Mitigation Solutions	
				2026 Summer Peak	2029 Summer Peak	2034 Summer Peak	2039 Summer Peak	2026 Spring Off-Peak	2029 Spring Off-Peak	2034 Spring Off-Peak	2039 Spring Off-Peak	2034 Winter Off-Peak	2026 SP Heavy Renewable	2026 SOP Heavy Renewable & Min Gas Gen	2029 SP High CEC Forecast		

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

2024-2025 ISO Reliability Assessment - Preliminary Study Results

Study Area: **PG&E Bulk**

Single Source Substation with more than 100 MW Load

Substation	Load Served (MW)											Potential Mitigation Solutions
	2025 Summer Peak	2028 Summer Peak	2035 Summer Peak	2025 Spring Off Peak	2028 Spring Off Peak	2035 Spring Off Peak	2035 Winter Peak	2025 SP Heavy Renewable	2025 SOP Heavy Renewable & Min Gas Gen	2028 SP High CEC Forecast	2035-SP-HalfSC	

No single source substation with more than 100 MW