



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)								Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	N/A	
NCNB-T-SEN-1	Ignacio - Mare Island #2 115kV line (Highway J2 - Highway)	Base Case	P0	No Contingency	104.99	99.46							Load growth seen from 56.5 MW in 2017 to 73.6 MW in 2025. EE of 3.5 MW modeled in 2025. Line is rated 75 MVA. Line section needs to be reconducted if EE doesn't materialize.
NCNB-T-SEN-2	Clear Lake - Eagle Rock 60 kV Line #1 (Clear Lake - Knocti)	BUS-TIE BREAKER CB102 FAULT AT 31200 MENDOCNO 115.00	P2-4	Bus Tie Breaker	112.89	99.30							No overload with EE. Overloaded without EE.
NCNB-T-SEN-3	Santa Rosa - Corona 115kV line (Bellvue - Penngrove)	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	123.14	111.56							Overloads worsen without EE.
NCNB-T-SEN-4	Santa Rosa - Corona 115kV line (Penngrove - Corona)	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	128.93	116.88							Overloads worsen without EE.
NCNB-T-SEN-5	Corona - Lakeville 115kV line	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	122.18	110.96							Overloads worsen without EE.
NCNB-T-SEN-6	Garberville - Laytonville 60kV line (Garberville - Kekawaka Jct)	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	103.06	91.77							No overload with EE. Overloaded without EE.
NCNB-T-SEN-7	Fulton - Hopland 60kV line (Hopland Jct - Cloverdale Jct)	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-8	Fulton - Hopland 60kV line (Cloverdale Jct - Geysers Jct)	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-9	Fulton - Hopland 60kV line (Geysers Jct - Fitch Mntn Jct)	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-10	Garberville - Laytonville 60kV line (Garberville - Kekawaka Jct)	Eagle Rock-Cortina 115kV Lines & Cortina-Mendocino No.1 115kV	P7	DCTL	105.27	95.69							No overload with EE. Overloaded without EE.
NCNB-T-SEN-11	Garberville - Laytonville 60kV line (Garberville - Kekawaka Jct)	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	104.18	96.15							No overload with EE. Overloaded without EE.
NCNB-T-SEN-12	Geyseys #3 - Cloverdale 115kV line (Cloverdale - MPE Tap)	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	100.29	93.59							No overload with EE. Overloaded without EE.
NCNB-T-SEN-13	Clear Lake - Eagle Rock 60 kV Line #1 (Clear Lake - Knocti)	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	108.78	99.00							No overload with EE. Overloaded without EE.
NCNB-T-SEN-14	Fulton - Hopland 60kV line (Hopland Jct - Cloverdale Jct)	FULTON-FTCHMTNP #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-15	Fulton - Hopland 60kV line (Cloverdale Jct - Geysers Jct)	FULTON-FTCHMTNP #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-16	Fulton - Hopland 60kV line (Geysers Jct - Fitch Mntn Jct)	FULTON-FTCHMTNP #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-17	Santa Rosa - Corona 115kV line (Bellvue - Penngrove)	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	123.06	111.56							Overloads worsen without EE.

Thermal Overloads

ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)								Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	N/A	
NCNB-T-SEN-18	Santa Rosa - Corona 115kV line (Penngrove - Corona)	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	128.85	116.88							Overloads worsen without EE.
NCNB-T-SEN-19	Corona - Lakeville 115kV line	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	122.10	110.96							Overloads worsen without EE.
NCNB-T-SEN-20	New Ignacio - San Rafael #2 115kV line	Ignacio-San Rafael #1 & Ignacio-Las Gallinas #1 115kV Lines	P7	DCTL	149.02	131.92							Overloads worsen without EE.
NCNB-T-SEN-21	New Ignacio - San Rafael #2 115kV line	Ignacio-San Rafael #1 & Las Gallinas-San Rafael #3 115kV Lines	P7	DCTL	115.10	102.12							Overloads worsen without EE.
NCNB-T-SEN-22	Ignacio - San Rafael #3 115kV line (Ignacio - Las gallinas)	Ignacio-San Rafael #2 & Ignacio-San Rafael #1 115kV Lines	P7	DCTL	130.47	115.75							Overloads worsen without EE.
NCNB-T-SEN-23	Ignacio - San Rafael #3 115kV line (Las gallinas - San Rafael)	Ignacio-San Rafael #2 & Ignacio-San Rafael #1 115kV Lines	P7	DCTL	107.71	95.56							Overloads worsen without EE.
NCNB-T-SEN-24	Ignacio - Bolinas #1 60kV line (Ignacio - Woodacre)	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-25	Ignacio - Bolinas #2 60kV line (Stafford Jct - Tocaloma Jct)	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-26	Ignacio - Bolinas #1 60kV line Bolinas - Woodacre)	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-27	Ignacio - Bolinas #2 60kV line (Olema - Bolinas)	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-28	Ignacio - Bolinas #2 60kV line (Tocaloma Jct - Olema)	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-29	Ignacio - Bolinas #2 60kV line (Tocaloma Jct - Olema)	IGNACO B-WOODACRE #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-30	Tulucay - Napa 60kV line #1 (Napa - Tulucay Jct)	TULUCAY-BSLT TAP #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Case diverges with and without EE.
NCNB-T-SEN-31	Garberville - Laytonville 60kV line (Garberville - Kekawaka Jct)	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	<100%							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-32	Garberville - Laytonville 60kV line (Garberville - Kekawaka Jct)	Ukiah-Hopland-Cloverdale 115 kV (Ukiah - Hopland Jct) and Cortina - Mendocino No.1 115 kV (Mendocino - Lucerne Jct1)	P6	Multiple Contingency	113.77	99.96							Overload worsens without EE. Open Breaker at Laytonville.
NCNB-T-SEN-33	Cortina - Mendocino 115kV line (Between Lucern Jt - Indian Vly)	Eagle Rock - Redbud 115 kV Line (Eagle rock - Highland J1) and Ukiah-Hopland-Cloverdale 115 kV (Ukiah - Hopland Jct)	P6	Multiple Contingency	104.02	95.25							No overload with EE. Line overloaded without EE.. Clear Lake 60kV reinforcement project

ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)								Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	N/A	
NCNB-T-SEN-34	Fulton - Santa Rosa #1 115kV line (Fulton - Monroe)	Corona- Lakeville 115kV Line and Fulton-Santa Rosa No.2 115 kV Line (Fulton - Monroe 2)	P6	Multiple Contingency	132.13	120.87							Overload worsens without EE. Drop load in the Santa Rosa Corona corridor as needed
NCNB-T-SEN-35	Fulton - Santa Rosa #2 115kV line (Fulton - Monroe)	Corona- Lakeville 115kV Line and Fulton-Santa Rosa No.1 115 kV Line (Fulton - Monroe 1)	P6	Multiple Contingency	131.41	120.30							Overload worsens without EE. Drop load in the Santa Rosa Corona corridor as needed
NCNB-T-SEN-36	Fulton - Santa Rosa #1 115kV line (Monroe - Santa Rosa)	Corona- Lakeville 115kV Line and Fulton-Santa Rosa No.2 115 kV Line (Fulton - Monroe 2)	P6	Multiple Contingency	121.29	111.12							Overload worsens without EE. Drop load in the Santa Rosa Corona corridor as needed
NCNB-T-SEN-37	Santa Rosa - Corona 115kV line (Bellvue - Penngrove)	Fulton- Santa Rosa No.1 115 kV Line (Fulton - Monroe 1) and Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroe 2)	P6	Multiple Contingency	123.20	111.67							Overload worsens without EE. Drop load in the Santa Rosa Corona corridor as needed
NCNB-T-SEN-38	Santa Rosa - Corona 115kV line (Penngrove - Corona)	Fulton- Santa Rosa No.1 115 kV Line (Fulton - Monroe 1) and Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroe 2)	P6	Multiple Contingency	128.98	116.98							Overload worsens without EE. Drop load in the Santa Rosa Corona corridor as needed
NCNB-T-SEN-39	Corona - Lakeville 115kV line	Fulton - Santa Rosa No.1 115 kV Line (Monroe 1 - Santa Rosa) and Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroe 2)	P6	Multiple Contingency	108.93	99.77							Overload worsens without EE. Drop load in the Santa Rosa Corona corridor as needed
NCNB-T-SEN-40	Mendocino - Philo Jct - Hopland 60kV line (Mendocino - Ukiah Jct)	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-41	Mendocino - Hartley 60 kV Line #1 (Mendocino - Upper Lake)	Konocti - Eagle Rock 60kV and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	118.08	98.41							No overload with EE. Line overloaded without EE.. Clear Lake 60kV reinforcement project
NCNB-T-SEN-42	Mendocino - Philo Jct - Hopland 60kV line (Ukiah Jct - Philo Jct)	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-43	Mendocino - Philo Jct - Hopland 60kV line (Ukiah Jct - Philo Jct)	Mendocino- Ukiah 115 kV(Mendocino - Calpella) and Geyser # 3 - Cloverdale 115K (Cloverdale - MPE TAP)	P6	Multiple Contingency	112.43	103.20							Overload worsens without EE. Clear Lake 60kV reinforcement project
NCNB-T-SEN-44	Clear Lake-Hopland 60kV line (Clear Lake-Granite)	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Eagle Rock 115/60 KV Bank #1	P6	Multiple Contingency	151.01	129.56							Overload worsens without EE. Clear Lake 60kV reinforcement project
NCNB-T-SEN-45	Clear Lake - Eagle Rock 60 kV Line #1 (Clear Lake - Konocti)	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	145.25	122.58							Overload worsens without EE. Clear Lake 60kV reinforcement project
NCNB-T-SEN-46	Clear Lake - Eagle Rock 60 kV Line #1 (Clear Lake - Konocti)	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)								Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	N/A	
NCNB-T-SEN-47	Clear Lake-Hopland 60kV line (Granite-Hopland)	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Eagle Rock 115/60 KV Bank #1	P6	Multiple Contingency	157.28	135.33							Overload worsens without EE. Clear Lake 60kV reinforcement project
NCNB-T-SEN-48	Hopland Sub 115kV / 60kV transformer	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-49	Hopland Sub 115kV / 60kV transformer	Geyser # 3 - Cloverdale 115K (Cloverdale - MPE TAP) and Mendocino- Ukiah 115 kV(Mendocino - Calpella)	P6	Multiple Contingency	148.05	141.50							Overload worsens without EE. Mitigation under review.
NCNB-T-SEN-50	Fulton - Hopland 60kV line (Hopland Jct - Cloverdale Jct)	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Eagle Rock- Fulton- Silverado 115 kv (Eagle rock - Silverado Jct2	P6	Multiple Contingency	100.64	100.05							Overload worsens without EE. Clear Lake 60kV reinforcement project
NCNB-T-SEN-51	Fulton - Hopland 60kV line (Hopland Jct - Cloverdale Jct)	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-52	Fulton - Hopland 60kV line (Cloverdale Jct - Geysers Jct)	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-53	Fulton - Hopland 60kV line (Geysers Jct - Fitch Mtn Jct)	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-54	Fulton #1 60kV line (Fulton - Fitch Mtn tap)	FULTON 115/60.00 KV BANK NO.1 and FULTON 115/60.00 KV BANK NO.2	P6	Multiple Contingency	NConv	NConv							Case diverges with and without EE. Mitigation under review.
NCNB-T-SEN-55	Ignacio - San Rafael #3 115kV line (Ignacio - Las gallinas)	Ignacio - San Rafael No. 1 115 kV Line and Ignacio - San Rafael No. 2 115 kV(New)	P6	Multiple Contingency	130.52	115.79							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-56	Ignacio - San Rafael #3 115kV line (Ignacio - Las gallinas)	Ignacio - San Rafael No. 2 115 kV(New) and Ignacio - San Rafael No. 1 115 kV Line	P6	Multiple Contingency	130.52	115.79							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-57	Ignacio - San Rafael #3 115kV line (Ignacio - Las gallinas)	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	100.66	<100%							No overload with EE. Line overloaded without EE.. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-58	Ignacio - San Rafael #3 115kV line (Ignacio - Las gallinas)	Ignacio B 115/60.00 kV BANK No. 1 and Ignacio 230/115 kV Bank #3	P6	Multiple Contingency	100.66	<100%							No overload with EE. Line overloaded without EE.. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-59	Ignacio - San Rafael #1 115kV line	Ignacio - San Rafael No. 2 115 kV(New) and Ignacio - San Rafael No. 3 115 kV Line (Las Gallinas - San Rafael)	P6	Multiple Contingency	105.99	94.04							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.



ID	Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)								Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	N/A	
NCNB-T-SEN-60	Ignacio - San Rafael #1 115kV line	Ignacio - San Rafael No. 2 115 kV(New) and Ignacio - San Rafael No.3 115 kV Line (Ignacio - Las Gallinas)	P6	Multiple Contingency	137.22	121.46							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-61	Ignacio - San Rafael #1 115kV line	Ignacio - San Rafael No. 3 115 kV Line (Las Gallinas - San Rafael) and Ignacio - San Rafael No. 2 115 kV(New)	P6	Multiple Contingency	105.99	94.04							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-62	Ignacio - San Rafael #1 115kV line	Ignacio - San Rafael No.3 115 kV Line (Ignacio - Las Gallinas) and Ignacio - San Rafael No. 2 115 kV(New)	P6	Multiple Contingency	137.22	121.46							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-63	New Ignacio - San Rafael #2 115kV line	Ignacio - San Rafael No. 1 115 kV Line and Ignacio - San Rafael No. 3 115 kV Line (Las Gallinas - San Rafael)	P6	Multiple Contingency	115.14	102.15							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-64	New Ignacio - San Rafael #2 115kV line	Ignacio - San Rafael No. 1 115 kV Line and Ignacio - San Rafael No.3 115 kV Line (Ignacio - Las Gallinas)	P6	Multiple Contingency	149.09	131.96							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-65	New Ignacio - San Rafael #2 115kV line	Ignacio - San Rafael No. 3 115 kV Line (Las Gallinas - San Rafael) and Ignacio - San Rafael No. 1 115 kV Line	P6	Multiple Contingency	115.14	102.15							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-66	New Ignacio - San Rafael #2 115kV line	Ignacio - San Rafael No.3 115 kV Line (Ignacio - Las Gallinas) and Ignacio - San Rafael No. 1 115 kV Line	P6	Multiple Contingency	149.09	131.96							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-67	Ignacio - San Rafael #3 115kV line (Las gallinas - San Rafael)	Ignacio - San Rafael No. 1 115 kV Line and Ignacio - San Rafael No. 2 115 kV(New)	P6	Multiple Contingency	107.75	95.59							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-68	Ignacio - San Rafael #3 115kV line (Las gallinas - San Rafael)	Ignacio - San Rafael No. 2 115 kV(New) and Ignacio - San Rafael No. 1 115 kV Line	P6	Multiple Contingency	107.75	95.59							Significant increase in overload without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-69	New Ignacio - San Rafael #2 115kV line (San Rafael - Greenbrae)	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	158.50	134.58							Overload worsens without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-70	New Ignacio - San Rafael #2 115kV line (San Rafael - Greenbrae)	Ignacio B 115/60.00 kV BANK No. 1 and Ignacio 230/115 kV Bank #3	P6	Multiple Contingency	158.50	134.58							Overload worsens without EE. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-71	Ignacio - Alto 60kV line (Greenbrae - Alto)	Ignacio 230/115 kV Bank #3 and Ignacio B 115/60.00 kV BANK No. 1	P6	Multiple Contingency	117.60	98.58							No overload with EE. Line overloaded without EE.. Ignacio - Alto Voltage conversion Project will fix it.
NCNB-T-SEN-72	Ignacio - Alto 60kV line (Greenbrae - Alto)	Ignacio B 115/60.00 kV BANK No. 1 and Ignacio 230/115 kV Bank #3	P6	Multiple Contingency	117.60	98.58							No overload with EE. Line overloaded without EE.. Ignacio - Alto Voltage conversion Project will fix it.

Study Area: **PG&E North Coast & North Bay**

Voltage Deviations



ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %								Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	N/A	
NCNB-VD-SEN-1	BELLVUE 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	11.861	10.743							Voltage deviation worsens without EE
NCNB-VD-SEN-2	MONROE1 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	15.437	14.035							Voltage deviation worsens without EE
NCNB-VD-SEN-3	MONROE2 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	15.501	14.093							Voltage deviation worsens without EE
NCNB-VD-SEN-4	SNTA RSA 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	14.761	13.403							Voltage deviation worsens without EE
NCNB-VD-SEN-5	STONY PT 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31236 FULTON 115.00	P2-4	Bus Tie Breaker	12.901	11.69							Voltage deviation worsens without EE
NCNB-VD-SEN-6	PUEBLO 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31255 LAKEVLE 115.00	P2-4	Bus Tie Breaker	12.132	10.469							Voltage deviation worsens without EE
NCNB-VD-SEN-7	SILVRDJ1 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31255 LAKEVLE 115.00	P2-4	Bus Tie Breaker	8.114	6.97							Voltage deviation worsens without EE
NCNB-VD-SEN-8	SONOMA 115 kV	BUS-TIE BREAKER CB102 FAULT AT 31255 LAKEVLE 115.00	P2-4	Bus Tie Breaker	15.537	13.556							Voltage deviation worsens without EE
NCNB-VD-SEN-9	BIG RIVR 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	12.193	4.584							Voltage deviation worsens without EE
NCNB-VD-SEN-10	COVELO6 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	16.615	10.046							Voltage deviation worsens without EE
NCNB-VD-SEN-11	ELK 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	10.266	4.279							Voltage deviation worsens without EE
NCNB-VD-SEN-12	FRT BRGG 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	14.081	6.228							Voltage deviation worsens without EE
NCNB-VD-SEN-13	GARCIA 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	10.266	4.281							Voltage deviation worsens without EE
NCNB-VD-SEN-14	KEKAWAKA 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	7.888	4.919							Voltage deviation worsens without EE
NCNB-VD-SEN-15	LYTNVLE 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	16.426	9.949							Voltage deviation worsens without EE
NCNB-VD-SEN-16	PHILO 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	7.426	3.505							Voltage deviation worsens without EE
NCNB-VD-SEN-17	PNT ARNA 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	10.263	4.28							Voltage deviation worsens without EE
NCNB-VD-SEN-18	PTTR VLY 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	19.117	11.088							Voltage deviation worsens without EE
NCNB-VD-SEN-19	WILLITS 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	19.3	11.362							Voltage deviation worsens without EE
NCNB-VD-SEN-20	CALPELLA 115 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	7.407	4.848							Voltage deviation worsens without EE
NCNB-VD-SEN-21	FTCH MTN 60 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	65.68	46.528							Voltage deviation worsens without EE
NCNB-VD-SEN-22	GRANITE 60 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	7.151	5.37							Voltage deviation worsens without EE
NCNB-VD-SEN-23	HPLND JT 60 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	11.493	8.163							Voltage deviation worsens without EE
NCNB-VD-SEN-24	HPLND JT 115 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	6.761	4.625							Voltage deviation worsens without EE

Study Area: **PG&E North Coast & North Bay**

Voltage Deviations



ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %							Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	
NCNB-VD-SEN-25	MENDOCNO 115 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	7.519	4.896						Voltage deviation worsens without EE
NCNB-VD-SEN-26	UKIAH 115 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	7.221	4.766						Voltage deviation worsens without EE
NCNB-VD-SEN-27	MIDDLTWN 60 kV	Eagle Rock-Cortina 115kV Lines & Cortina-Mendocino No.1 115kV	P7	DCTL	11.925	10.886						Voltage deviation worsens without EE
NCNB-VD-SEN-28	CALPELLA 115 kV	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	10.546	7.807						Voltage deviation worsens without EE
NCNB-VD-SEN-29	HPLND JT 115 kV	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	6.783	5.221						Voltage deviation worsens without EE
NCNB-VD-SEN-30	LUCERNE 115 kV	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	13.084	9.915						Voltage deviation worsens without EE
NCNB-VD-SEN-31	MENDOCNO 115 kV	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	11.102	8.183						Voltage deviation worsens without EE
NCNB-VD-SEN-32	REDBUD 115 kV	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	10.997	7.438						Voltage deviation worsens without EE
NCNB-VD-SEN-33	UKIAH 115 kV	Eagle Rock-Redbud & Cortina-Mendocino No.1 115 kV Lines	P7	DCTL	9.63	7.184						Voltage deviation worsens without EE
NCNB-VD-SEN-34	MIDDLTWN 60 kV	Eagle Rock-Redbud & Eagle Rock-Cortina 115kV Lines	P7	DCTL	11.823	10.558						Voltage deviation worsens without EE
NCNB-VD-SEN-35	BELLVUE 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	11.808	10.744						Voltage deviation worsens without EE
NCNB-VD-SEN-36	MONROE1 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	15.382	14.035						Voltage deviation worsens without EE
NCNB-VD-SEN-37	MONROE2 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	15.446	14.093						Voltage deviation worsens without EE
NCNB-VD-SEN-38	SNTA RSA 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	14.706	13.404						Voltage deviation worsens without EE
NCNB-VD-SEN-39	STONY PT 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	12.847	11.691						Voltage deviation worsens without EE
NCNB-VD-SEN-40	MIDDLTWN 60 kV	HOMSTKTP-MIDDLTWN #1 115 kV	P2-1	Line Section Open	11.77	10.415						Voltage deviation worsens without EE
NCNB-VD-SEN-41	BOLINAS 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Voltage deviation worsens without EE
NCNB-VD-SEN-42	OLEMA 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Voltage deviation worsens without EE
NCNB-VD-SEN-43	STAFFORD 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Voltage deviation worsens without EE
NCNB-VD-SEN-44	TOCALOMA 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Voltage deviation worsens without EE
NCNB-VD-SEN-45	BOLINAS 60 kV	IGNACO B-WOODACRE #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Voltage deviation worsens without EE

Study Area: **PG&E North Coast & North Bay**

Voltage Deviations



ID	Substation	Worst Contingency	Category	Category Description	Post Cont. Voltage Deviation %								Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	N/A	
NCNB-VD-SEN-46	OLEMA 60 kV	IGNACO B-WOODACRE #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Voltage deviation worsens without EE
NCNB-VD-SEN-47	WOODACRE 60 kV	IGNACO B-WOODACRE #1 60 kV	P2-1	Line Section Open	Nconv	Nconv							Voltage deviation worsens without EE
NCNB-VD-SEN-48	PUEBLO 115 kV	Lakeville-Sonoma #1 & #2 115kV Lines	P7	DCTL	10.682	9.246							Voltage deviation worsens without EE
NCNB-VD-SEN-49	SONOMA 115 kV	Lakeville-Sonoma #1 & #2 115kV Lines	P7	DCTL	14.036	12.296							Voltage deviation worsens without EE

Study Area: PG&E North Coast & North Bay

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)							Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	
NCNB-V-SEN-1	COVELO6 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	0.8123	0.8853						Low voltage worsens without EE
NCNB-V-SEN-2	FRT BRGG 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	0.875	0.9557						Low voltage worsens without EE
NCNB-V-SEN-3	LYTNVLE 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	0.8222	0.8936						Low voltage worsens without EE
NCNB-V-SEN-4	PTTR VLY 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	0.8228	0.9059						Low voltage worsens without EE
NCNB-V-SEN-5	WILLITS 60 kV	BUS-TIE BREAKER CB42 FAULT AT 31300 MENDOCNO 60.00	P2-4	Bus Tie Breaker	0.8011	0.8847						Low voltage worsens without EE
NCNB-V-SEN-6	FTCH MTN 60 kV	BUS-TIE BREAKER FAULT AT 31378 FULTON 60.00	P2-4	Bus Tie Breaker	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-7	FTCH MTN 60 kV	FULTON-FTCHMTNP #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-8	BELLVUE 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	0.8689	0.8852						Low voltage worsens without EE
NCNB-V-SEN-9	MONROE1 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	0.8404	0.8589						Low voltage worsens without EE
NCNB-V-SEN-10	MONROE2 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	0.8388	0.8575						Low voltage worsens without EE
NCNB-V-SEN-11	SNTA RSA 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	0.8421	0.8606						Low voltage worsens without EE
NCNB-V-SEN-12	STNY PTP 115 kV	Fulton-Santa Rosa #1 & #2 115kV Lines	P7	DCTL	0.8586	0.8757						Low voltage worsens without EE
NCNB-V-SEN-13	MIDDLTWN 115 kV	HOMSTKTP-MIDDLTWN #1 115 kV	P2-1	Line Section Open	0.8511	0.8639						Low voltage worsens without EE
NCNB-V-SEN-14	BOLINAS 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-15	OLEMA 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-16	STAFFORD 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-17	TOCALOMA 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-18	WOODACRE 60 kV	IGNACO B-STAF_JCT #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-19	BOLINAS 60 kV	IGNACO B-WOODACRE #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE
NCNB-V-SEN-20	WOODACRE 60 kV	IGNACO B-WOODACRE #1 60 kV	P2-1	Line Section Open	Nconv	Nconv						Case diverges with and without EE

Study Area: PG&E North Coast & North Bay

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)							Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	
NCNB-V-SEN-21	SONOMA 115 kV	Lakeville-Sonoma #1 & #2 115kV Lines	P7	DCTL	0.8709	0.8934						Low voltage worsens without EE
NCNB-V-SEN-22	CLER LKE 60 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-23	GRANITE 60 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-24	HARTLEY 60 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-25	KONOCTI6 60 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-26	LOWR LKE 60 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-27	MIDDLTWN 60 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-28	MIDDLTWN 115 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-29	UPPR LKE 60 kV	Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2) and Konocti - Eagle Rock 60kV	P6	Multiple Contingency	Nconv	Nconv						Non-Convergent case with and without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-30	CLER LKE 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.8018	0.8456						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-31	EGLE RCK 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.6877	0.7537						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-32	GRANITE 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.8372	0.8753						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-33	HARTLEY 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.8244	0.8619						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-34	KONOCTI6 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.6875	0.7535						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-35	LOWR LKE 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.6396	0.7166						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-36	MIDDLTWN 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.5676	0.6599						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-37	MIDDLTWN 115 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.5247	0.6101						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.

Study Area: **PG&E North Coast & North Bay**

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)							Potential Mitigation Solutions
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	
NCNB-V-SEN-38	UPPR LKE 60 kV	Eagle Rock 115/60 KV Bank #1 and Eagle Rock - Cortina 115 kV Line (Lower Lake Jct - Highland J2)	P6	Multiple Contingency	0.864	0.8933						Voltage worsens without EE. Clear Lake 60kV reinforcement project will fix it.
NCNB-V-SEN-39	BELLVUE 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton - Santa Rosa No.1 115 kV Line (Monroe 1 - Santa Rosa)	P6	Multiple Contingency	0.8877	0.8993						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-40	MONROE2 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton - Santa Rosa No.1 115 kV Line (Monroe 1 - Santa Rosa)	P6	Multiple Contingency	0.8619	0.8753						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-41	SNTA RSA 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton - Santa Rosa No.1 115 kV Line (Monroe 1 - Santa Rosa)	P6	Multiple Contingency	0.8651	0.8783						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-42	STONY PT 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton - Santa Rosa No.1 115 kV Line (Monroe 1 - Santa Rosa)	P6	Multiple Contingency	0.8745	0.8867						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-43	BELLVUE 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton- Santa Rosa No.1 115 kV Line (Fulton - Monroee 1)	P6	Multiple Contingency	0.8682	0.8846						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-44	MONROE1 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton- Santa Rosa No.1 115 kV Line (Fulton - Monroee 1)	P6	Multiple Contingency	0.8396	0.8583						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-45	MONROE2 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton- Santa Rosa No.1 115 kV Line (Fulton - Monroee 1)	P6	Multiple Contingency	0.8381	0.8569						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-46	SNTA RSA 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton- Santa Rosa No.1 115 kV Line (Fulton - Monroee 1)	P6	Multiple Contingency	0.8414	0.8599						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-47	STONY PT 115 kV	Fulton- Santa Rosa No.2 115 kV Line (Fulton - Monroee 2) and Fulton- Santa Rosa No.1 115 kV Line (Fulton - Monroee 1)	P6	Multiple Contingency	0.8534	0.8707						Low voltages due to thermal overloads. Drop load in Santa Rosa - Corono corridor.
NCNB-V-SEN-48	CLOVRDLE 115 kV	Geyser # 3 - Cloverdale 115K (Cloverdale - MPE TAP) and Mendocino- Ukiah 115 kV(Mendocino - Calpella)	P6	Multiple Contingency	0.8047	0.8216						Clear Lake 60kV reinforcement project
NCNB-V-SEN-49	HPLND JT 60 kV	Geyser # 3 - Cloverdale 115K (Cloverdale - MPE TAP) and Mendocino- Ukiah 115 kV(Mendocino - Calpella)	P6	Multiple Contingency	0.8565	0.8692						Clear Lake 60kV reinforcement project

Study Area: **PG&E North Coast & North Bay**

High/Low Voltage



ID	Substation	Worst Contingency	Category	Category Description	Voltage (PU)							Potential Mitigation Solutions	
					2025 SP No AAEE	2025 Retirement of QF Generations	N/A	N/A	N/A	N/A	N/A	N/A	
NCNB-V-SEN-50	HPLND JT 115 kV	Geyser # 3 - Cloverdale 115K (Cloverdale - MPE TAP) and Mendocino- Ukiah 115 kV(Mendocino - Calpella)	P6	Multiple Contingency	0.8095	0.826							Clear Lake 60kV reinforcement project
NCNB-V-SEN-51	UKIAH 115 kV	Geyser # 3 - Cloverdale 115K (Cloverdale - MPE TAP) and Mendocino- Ukiah 115 kV(Mendocino - Calpella)	P6	Multiple Contingency	0.7896	0.807							Clear Lake 60kV reinforcement project