

Thermal Overloads

Monitored Facility	Cont Name	Category	Category Description	Loading % (Baseline Scenarios)								Loading % (Sensitivity Scenarios)					Project & Potential Mitigation Solutions
				2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Winter Peak	2022 Winter Peak	2027 Winter Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022 SP High CEC Forecast	2019 SP Peak-Shift	2027 SP Peak-Shift	2022 SP Heavy Renewable & Min Gas Gen	2027 Retirement of QF Generations	
30915 MORROBAY 230 30925 DIABLOCN 230 1 1	P2-4:A20:2:_MORROBAY 230kV - Section 2E & 2D	P2	Bus-tie breaker fault	71.2	75.5	75.0	113.8	114.2	114.9	41.6	55.2	130.0	124.5	129.6	61.3	74.9	Project: Midway-Andrew 230 KV - Scope under review
30925 DIABLOCN 230 30930 MESA PGE 230 1 1	P2-4:A20:2:_MORROBAY 230kV - Section 2E & 2D	P2	Bus-tie breaker fault	69.3	75.2	74.8	115.5	115.9	116.6	39.8	53.1	132.4	128.3	132.0	58.9	74.6	Project: Midway-Andrew 230 KV - Scope under review
34117 KETLMN T 70.0 34552 GATES 70.0 1 1	Base Case	P0	Normal	18.4	25.3	28.5	20.2	20.3	20.4	19.9	97.0	25.0	25.7	25.2	126.6	34.3	Generation Mitigation
35910 CRZY_HRS 115 35913 NTVD SW2 115 1 1	P5-5:A19:49:_Crazy Horse Canyon Sw. Sta. 115kV BAAH Bus #2 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	82.7	92.4	102.5	46.4	50.3	56.6	31.1	30.7	97.8	87.1	106.7	65.7	102.6	Proposal to reconductor the Crazy Horse-Natividad SW Station #2 115 KV Lines. Protection upgrade
35910 CRZY_HRS 115 35913 NTVD SW2 115 1 1	CRAZY HORSE CANYON-SALINAS-SOLEDAD #1 115kV & SALINAS-MOSSLNSW-DOLAN RD 115kV	P6	N-1-1	110.71	108.84	107.26	<100	<100	<100	<100	<100	115.2	109.8	111.14	<100	107.31	Proposal to reconductor the Crazy Horse-Natividad SW Station #2 115 KV Lines
	SALINAS-MOSSLNSW-DOLAN RD 115kV & MOSS LANDING-SALINAS #2 115kV	P6	N-1-1	126.05	129.33	128.68	93.2	93.3	98.44	<100	<100	137.35	129.71	134.04	99.23	128.75	Proposal to reconductor the Crazy Horse-Natividad SW Station #2 115 KV Lines
	P7-1:A19:4:_Moss Landing - Salinas #1 and #2 115 kV Lines	P7	DCTL	126.1	129.3	128.7	93.3	93.5	98.8	57.2	74.3	137.4	129.7	134.0	99.3	128.8	Proposal to reconductor the Crazy Horse-Natividad SW Station #2 115 KV Lines
35910 CRZY_HRS 115 35914 NTVD SW1 115 1 1	P7-1:A19:4:_Moss Landing - Salinas #1 and #2 115 kV Lines	P7	DCTL	126.1	129.3	128.7	93.3	93.5	98.8	57.2	74.3	137.4	129.7	134.0	99.3	128.8	Proposal to reconductor the Crazy Horse-Natividad SW Station #1 115 KV Lines
35913 NTVD SW2 115 35920 SALINAS 115 1 1	P5-5:A19:49:_Crazy Horse Canyon Sw. Sta. 115kV BAAH Bus #2 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	181.7	189.6	206.0	97.7	103.2	115.4	66.4	75.7	199.8	181.8	212.3	133.8	206.2	Proposal to reconductor the Salinas-Natividad SW Station #1 115 KV Lines. Protection upgrade
	SALINAS-MOSSLNSW-DOLAN RD 115kV & MOSS LANDING-SALINAS #2 115kV	P6	N-1-1	103.53	110.17	107.48	<100	<100	90.03	<100	<100	117.67	111.25	113.03	<100	107.53	Proposal to reconductor the Salinas-Natividad SW Station #2 115 KV Lines
	P7-1:A19:4:_Moss Landing - Salinas #1 and #2 115 kV Lines	P7	DCTL	103.5	110.2	107.5	86.6	86.6	90.4	49.8	65.7	117.7	111.3	113.0	87.0	107.5	Proposal to reconductor the Salinas-Natividad SW Station #2 115 KV Lines
	P7-1:A19:6:_Moss Landing - Crazy Horse #1 and #2 115 kV Lines	P7	DCTL	90.8	91.8	99.4	48.1	50.7	56.5	33.8	37.7	96.5	88.2	102.3	65.6	99.4	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
	P7-1:A19:4:_Moss Landing - Salinas #1 and #2 115 kV Lines	P7	DCTL	103.5	110.2	107.5	86.6	86.6	90.4	49.8	65.7	117.7	111.3	113.0	87.0	107.5	Proposal to reconductor the Salinas-Natividad SW Station #1 115 KV Lines
	P7-1:A19:6:_Moss Landing - Crazy Horse #1 and #2 115 kV Lines	P7	DCTL	90.8	91.8	99.4	48.1	50.7	56.5	33.8	37.7	96.5	88.2	102.3	65.6	99.4	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
36008 GREN VLY 60.0 35901 GRN VLY1 115 1 1	P5-5:A19:55:_Salinas 115kV BAAH Bus #1 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	235.0	232.2	224.3	223.5	224.7	144.6	201.8	239.8	231.3	237.8	230.0	232.0	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	P5-5:A19:56:_Salinas 115kV BAAH Bus #2 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	NConv	NConv	NConv	NConv	NConv	218.2	225.5	NConv	NConv	NConv	250.0	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	SALINAS 115/60kV TB 2 & SALINAS 115/60kV TB 3	P6	N-1-1	NConv	236.47	231.15	223.32	222.51	224.05	144.41	203.67	238.55	230.24	236.58	229.76	230.95	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
36008 GREN VLY 60.0 36013 ERTA JCT 60.0 1 1	P5-5:A19:55:_Salinas 115kV BAAH Bus #1 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	176.5	173.7	132.2	131.9	132.8	106.0	151.3	180.2	176.0	177.9	169.8	173.6	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	P5-5:A19:56:_Salinas 115kV BAAH Bus #2 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	NConv	NConv	NConv	NConv	NConv	163.1	169.2	NConv	NConv	NConv	185.2	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	P7-1:A19:1:_Moss Landing - Green Valley #1 and #2 115 kV Lines	P7	DCTL	NConv	NConv	NConv	NConv	NConv	NConv	NConv	121.1	NConv	NConv	NConv	NConv	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
	P5-5:A19:55:_Salinas 115kV BAAH Bus #1 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	174.0	171.2	129.7	129.3	130.0	104.7	149.9	177.7	173.6	175.4	168.0	171.1	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review

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				2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Winter Peak	2022 Winter Peak	2027 Winter Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022 SP High CEC Forecast	2019 SP Peak-Shift	2027 SP Peak-Shift	2022 SP Heavy Renewable & Min Gas Gen	2027 Retirement of QF Generations	
36011 CIC JCT 60.0 36013 ERTA JCT 60.0 1 1	P5-5:A19:56:_Salinas 115kV BAAH Bus #2 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	NConv	NConv	NConv	NConv	NConv	161.5	167.9	NConv	NConv	NConv	183.4	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	SALINAS 115/60kV TB 2 & SALINAS 115/60kV TB 3	P6	N-1-1	NConv	174.4	170.82	129.5	129.08	129.82	104.65	150.32	177.33	173.35	175.01	167.91	170.76	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
	P7-1:A19:1:_Moss Landing - Green Valley #1 and #2 115 kV Lines	P7	DCTL	NConv	NConv	NConv	NConv	NConv	NConv	NConv	122.9	NConv	NConv	NConv	NConv	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
36011 CIC JCT 60.0 36016 AGRILINK 60.0 1 1	P5-5:A19:55:_Salinas 115kV BAAH Bus #1 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	174.0	171.2	129.7	129.3	130.0	104.7	149.9	177.8	173.6	175.4	168.0	171.1	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	P5-5:A19:56:_Salinas 115kV BAAH Bus #2 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	NConv	NConv	NConv	NConv	NConv	161.5	167.9	NConv	NConv	NConv	183.4	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	P7-1:A19:1:_Moss Landing - Green Valley #1 and #2 115 kV Lines	P7	DCTL	NConv	NConv	NConv	NConv	NConv	NConv	NConv	122.8	NConv	NConv	NConv	NConv	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
36012 WTSNVLLE 60.0 36014 GRANT JT 60.0 1 1	P5-5:A19:55:_Salinas 115kV BAAH Bus #1 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	214.8	213.2	163.0	162.5	162.9	132.5	191.7	217.4	212.9	215.6	207.8	213.2	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	P5-5:A19:56:_Salinas 115kV BAAH Bus #2 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	NConv	NConv	NConv	NConv	NConv	216.9	216.2	NConv	NConv	NConv	228.9	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	SALINAS 115/60kV TB 2 & SALINAS 115/60kV TB 3	P6	N-1-1	NConv	215.49	212.75	162.65	162.06	162.55	132.35	192.32	216.68	212.63	215.28	207.61	212.65	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
	P7-1:A19:1:_Moss Landing - Green Valley #1 and #2 115 kV Lines	P7	DCTL	NConv	NConv	NConv	NConv	NConv	NConv	NConv	183.6	NConv	NConv	NConv	NConv	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
36012 WTSNVLLE 60.0 36016 AGRILINK 60.0 1 1	P5-5:A19:55:_Salinas 115kV BAAH Bus #1 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	173.5	170.7	129.4	129.0	129.7	104.4	149.5	177.3	173.2	175.0	167.6	170.7	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	P5-5:A19:56:_Salinas 115kV BAAH Bus #2 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	NConv	NConv	NConv	NConv	NConv	161.4	167.5	NConv	NConv	NConv	183.0	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	MOSS LANDING-GREEN VALLEY #1 115kV & MOSS LANDING-GREEN VALLEY #2 115kV	P6	N-1-1	NConv	NConv	NConv	NConv	NConv	NConv	NConv	119.93	NConv	NConv	NConv	NConv	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
	SALINAS 115/60kV TB 2 & SALINAS 115/60kV TB 3	P6	N-1-1	NConv	174	170.41	129.18	128.76	129.5	104.39	149.95	176.92	172.92	174.6	167.51	170.35	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
	P7-1:A19:1:_Moss Landing - Green Valley #1 and #2 115 kV Lines	P7	DCTL	NConv	NConv	NConv	NConv	NConv	NConv	NConv	123.3	NConv	NConv	NConv	NConv	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
36018 BRIGTANO 60.0 36014 GRANT JT 60.0 1 1	P5-5:A19:55:_Salinas 115kV BAAH Bus #1 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	192.5	191.3	146.0	145.5	145.8	125.8	171.9	195.0	190.5	193.1	187.0	191.2	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	P5-5:A19:56:_Salinas 115kV BAAH Bus #2 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	NConv	NConv	NConv	NConv	NConv	202.3	194.1	NConv	NConv	NConv	207.1	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	SALINAS 115/60kV TB 2 & SALINAS 115/60kV TB 3	P6	N-1-1	NConv	193.16	190.73	145.44	144.82	145.28	125.77	172.64	194.15	190.53	192.68	186.54	190.62	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
	P7-1:A19:1:_Moss Landing - Green Valley #1 and #2 115 kV Lines	P7	DCTL	NConv	NConv	NConv	NConv	NConv	NConv	NConv	204.9	NConv	NConv	NConv	NConv	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
36018 BRIGTANO 60.0 36022 LGNSTAP 60.0 1 1	P5-5:A19:55:_Salinas 115kV BAAH Bus #1 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	211.1	209.9	160.6	159.9	160.4	140.3	188.6	213.9	209.0	212.4	205.7	209.7	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	P5-5:A19:56:_Salinas 115kV BAAH Bus #2 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	NConv	NConv	NConv	NConv	NConv	231.3	213.0	NConv	NConv	NConv	228.2	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
36018 BRIGTANO 60.0 36022 LGNSTAP 60.0 1 1	MOSS LANDING-GREEN VALLEY #1 115kV & MOSS LANDING-GREEN VALLEY #2 115kV	P6	N-1-1	NConv	NConv	NConv	NConv	NConv	NConv	NConv	243.94	NConv	NConv	NConv	NConv	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review

Thermal Overloads

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				2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Winter Peak	2022 Winter Peak	2027 Winter Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022 SP High CEC Forecast	2019 SP Peak-Shift	2027 SP Peak-Shift	2022 SP Heavy Renewable & Min Gas Gen	2027 Retirement of QF Generations	
		P7	DCTL	NConv	NConv	NConv	NConv	NConv	NConv	NConv	250.0	NConv	NConv	NConv	NConv	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
36022 LGNSTAP 60.0 36025 SALINAS2 60.0 1 1	P5-5:A19:55:_Salinas 115kV BAAH Bus #1 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	213.4	211.5	160.7	160.4	160.4	139.2	188.7	215.4	212.0	215.2	205.6	211.6	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	P5-5:A19:56:_Salinas 115kV BAAH Bus #2 (failure of non-redundent relay)	P5	Non-redundant relay (Bus)	NConv	NConv	NConv	NConv	NConv	NConv	231.1	213.3	NConv	NConv	NConv	228.8	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review. Protection upgrade - Scope under review
	MOSS LANDING-GREEN VALLEY #1 115kV & MOSS LANDING-GREEN VALLEY #2 115kV	P6	N-1-1	NConv	NConv	NConv	NConv	NConv	NConv	NConv	241.98	NConv	NConv	NConv	NConv	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
	SALINAS 115/60kV TB 2 & SALINAS 115/60kV TB 3	P6	N-1-1	NConv	214.16	210.03	161	160.85	161.54	139	190.08	214.46	209	213.53	207.36	209.9	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
	P7-1:A19:1:_Moss Landing - Green Valley #1 and #2 115 kV Lines	P7	DCTL	NConv	NConv	NConv	NConv	NConv	NConv	NConv	247.8	NConv	NConv	NConv	NConv	NConv	Project: Watsonville 60 KV to 115 KV Voltage conversion. - Scope under review
36048 B.VSTA J 60.0 36050 FIRESTNE 60.0 1 1	P2-1:A19:47:_SALINAS-FIRESTONE #1 60kV [7900] (SALINAS1-FREXP JT)	P2	N-1 (Transmission Line)	115.9	113.2	99.2	50.7	48.0	44.6	44.2	86.2	123.7	118.1	105.8	98.2	99.3	Transmission Reconfiguration
36050 FIRESTNE 60.0 36052 SPNCE J2 60.0 1 1	P2-1:A19:47:_SALINAS-FIRESTONE #1 60kV [7900] (SALINAS1-FREXP JT)	P2	N-1 (Transmission Line)	113.1	114.1	100.5	53.3	50.6	47.1	44.3	88.7	124.7	119.0	106.7	99.8	100.6	Transmission Reconfiguration
36051 SPNCE J1 60.0 36053 SPENCE 60.0 1 1	P2-1:A19:47:_SALINAS-FIRESTONE #1 60kV [7900] (SALINAS1-FREXP JT)	P2	N-1 (Transmission Line)	166.8	174.9	161.3	88.7	85.9	84.0	75.6	132.6	186.2	179.8	167.4	153.8	161.4	Transmission Reconfiguration
36051 SPNCE J1 60.0 36054 SNBRN JT 60.0 1 1	P2-1:A19:47:_SALINAS-FIRESTONE #1 60kV [7900] (SALINAS1-FREXP JT)	P2	N-1 (Transmission Line)	144.6	151.5	139.7	81.6	79.0	77.3	65.6	114.9	161.4	155.8	145.1	133.3	139.8	Transmission Reconfiguration
36052 SPNCE J2 60.0 36053 SPENCE 60.0 1 1	P2-1:A19:47:_SALINAS-FIRESTONE #1 60kV [7900] (SALINAS1-FREXP JT)	P2	N-1 (Transmission Line)	120.2	121.3	106.9	57.0	54.1	50.4	47.1	94.2	132.6	126.5	113.4	106.1	106.9	Transmission Reconfiguration
36251 FTHILTP2 115 36254 SN LS OB 115 1 1	P2-4:A20:1:_MORROBAY 230kV - Section 2E & 1E	P2	Bus-tie breaker fault	112.8	110.6	110.4	85.1	85.6	85.6	51.5	98.1	113.5	110.0	113.1	84.6	110.2	Project: Midway-Andrew 230 KV - Scope under review
	MESA PGE 230/115kV TB 2 & MESA PGE 230/115kV TB 3	P6	N-1-1	117.8	117.86	117.92	96.1	96.79	98.62	<100	107.3	123.21	116.13	122.92	91.65	117.83	Project: Midway-Andrew 230 KV - Scope under review
	MORRO BAY-MESA 230kV & DIABLO-MESA 230kV	P6	N-1-1	120.32	119.73	119.58	98.42	99.24	100.36	<100	92.69	124.39	117.88	124.7	91.49	119.44	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:16:_Morro Bay-Mesa and Morro Bay-Diablo 230 kV Lines	P7	DCTL	127.3	125.6	125.4	98.6	99.2	100.6	52.7	111.3	130.0	124.2	129.9	98.1	125.5	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:17:_Morro Bay-Mesa and Diablo-Mesa 230 kV Lines	P7	DCTL	107.3	108.1	123.9	97.8	98.5	100.2	50.5	108.9	128.6	122.2	128.4	96.4	123.9	Project: Midway-Andrew 230 KV - Scope under review
36252 MORRO BY 115 30915 MORROBAY 230 6 1	P2-4:A20:1:_MORROBAY 230kV - Section 2E & 1E	P2	Bus-tie breaker fault	124.0	115.8	116.1	121.1	120.4	118.8	72.4	104.9	119.1	117.9	118.5	93.5	115.3	Project: Midway-Andrew 230 KV - Scope under review
	P2-4:A20:5:_MESA_PGE 115kV - Section 2D & 1D	P2	Bus-tie breaker fault	99.7	102.7	103.2	114.9	115.4	118.1	73.7	85.5	107.5	103.2	108.5	90.1	102.5	Project: Midway-Andrew 230 KV - Scope under review
	MESA PGE 230/115kV TB 2 & MESA PGE 230/115kV TB 3	P6	N-1-1	145.23	139.14	139.76	154.93	154.84	157.47	<100	128.52	147.01	140.64	145.25	111.84	139.36	Project: Midway-Andrew 230 KV - Scope under review
	MORRO BAY-DIABLO 230kV & MORRO BAY-MESA 230kV	P6	N-1-1	NConv	139.95	140.41	155.63	155.54	158.01	<100	113.48	145.3	140.79	145.82	113.11	140.11	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:16:_Morro Bay-Mesa and Morro Bay-Diablo 230 kV Lines	P7	DCTL	156.1	149.6	149.8	155.5	155.3	157.4	73.8	129.8	155.1	149.4	155.0	116.1	149.6	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:17:_Morro Bay-Mesa and Diablo-Mesa 230 kV Lines	P7	DCTL	136.7	133.1	149.7	156.2	156.3	158.5	71.3	129.0	155.2	148.7	155.1	115.9	149.5	Project: Midway-Andrew 230 KV - Scope under review
36252 MORRO BY 115 36303 GLDTRJC1 115 1 1	P2-4:A20:1:_MORROBAY 230kV - Section 2E & 1E	P2	Bus-tie breaker fault	124.1	120.1	120.0	127.2	127.6	127.6	57.6	106.6	124.1	119.6	123.6	91.1	119.8	Project: Midway-Andrew 230 KV - Scope under review
	P2-4:A20:5:_MESA_PGE 115kV - Section 2D & 1D	P2	Bus-tie breaker fault	82.4	86.4	86.6	96.7	98.0	100.8	59.8	73.6	90.4	85.8	91.1	77.0	86.1	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:16:_Morro Bay-Mesa and Morro Bay-Diablo 230 kV Lines	P7	DCTL	137.2	133.6	133.6	142.4	143.3	145.9	58.4	118.9	139.0	132.4	138.7	104.1	133.6	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:17:_Morro Bay-Mesa and Diablo-Mesa 230 kV Lines	P7	DCTL	116.6	115.5	131.9	141.0	142.1	145.0	56.3	116.3	137.3	130.2	137.1	102.3	131.9	Project: Midway-Andrew 230 KV - Scope under review
	P2-4:A20:1:_MORROBAY 230kV - Section 2E & 1E	P2	Bus-tie breaker fault	120.3	117.9	117.8	95.5	96.1	96.3	56.1	104.0	121.8	117.3	121.4	89.5	117.6	Project: Midway-Andrew 230 KV - Scope under review

Thermal Overloads

Monitored Facility	Cont Name	Category	Category Description	Loading % (Baseline Scenarios)								Loading % (Sensitivity Scenarios)					Project & Potential Mitigation Solutions
				2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Winter Peak	2022 Winter Peak	2027 Winter Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022 SP High CEC Forecast	2019 SP Peak-Shift	2027 SP Peak-Shift	2022 SP Heavy Renewable & Min Gas Gen	2027 Retirement of QF Generations	
	MORRO BAY-MESA 230kV & DIABLO-MESA 230kV	P6	N-1-1	126.88	125.97	125.91	106.7	107.63	110.05	<100	114.07	131.48	124.28	131.89	97.91	125.82	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:16:_Morro Bay-Mesa and Morro Bay-Diablo 230 kV Lines	P7	DCTL	133.7	131.7	131.6	107.5	108.5	110.6	57.0	116.5	136.9	130.3	136.8	102.6	131.6	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:17:_Morro Bay-Mesa and Diablo-Mesa 230 kV Lines	P7	DCTL	113.2	113.7	130.0	106.6	107.6	109.9	54.9	114.0	135.3	128.1	135.2	100.8	130.0	Project: Midway-Andrew 230 KV - Scope under review
36253 FTHILTP1 115 36254 SN LS OB 115 1 1	P2-4:A20:1:_MORROBAY 230kV - Section 2E & 1E	P2	Bus-tie breaker fault	119.1	113.6	113.4	114.9	114.7	114.3	53.6	102.0	116.6	113.2	115.9	86.7	113.1	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:16:_Morro Bay-Mesa and Morro Bay-Diablo 230 kV Lines	P7	DCTL	133.0	128.2	128.0	131.7	131.9	133.5	54.7	114.8	132.6	127.0	132.3	100.1	128.0	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:17:_Morro Bay-Mesa and Diablo-Mesa 230 kV Lines	P7	DCTL	112.8	110.5	126.4	130.5	130.9	132.8	52.5	112.4	131.1	125.0	130.8	98.4	126.4	Project: Midway-Andrew 230 KV - Scope under review
36254 SN LS OB 115 34796 CARRIZO 115 1 1	P7-1:A20:17:_Morro Bay-Mesa and Diablo-Mesa 230 kV Lines	P7	DCTL	100.5	100.4	2.3	1.6	1.6	1.6	44.9	2.2	2.3	2.3	2.3	74.4	2.3	Project: Midway-Andrew 230 KV - Scope under review
36254 SN LS OB 115 36266 SNTA MRA 115 1 1	P2-4:A20:1:_MORROBAY 230kV - Section 2E & 1E	P2	Bus-tie breaker fault	215.9	201.8	200.7	171.5	171.3	168.5	128.5	197.0	202.2	201.0	199.8	213.8	199.5	Project: Midway-Andrew 230 KV - Scope under review
	P2-4:A20:5:_MESA_PGE 115kV - Section 2D & 1D	P2	Bus-tie breaker fault	283.9	274.8	274.3	239.6	240.6	241.2	215.9	255.4	281.9	270.3	279.8	252.6	274.3	Project: Midway-Andrew 230 KV - Scope under review
	MESA PGE 230/115kV TB 2 & MESA PGE 230/115kV TB 3	P6	N-1-1	227.81	219.74	219.12	197.87	198.14	198.3	110.52	212.98	226.57	216.42	223.35	222.08	218.55	Project: Midway-Andrew 230 KV - Scope under review
	MORRO BAY-MESA 230kV & DIABLO-MESA 230kV	P6	N-1-1	232.07	223.49	222.45	202.79	203.67	202.17	117.99	227.26	227.02	219.21	226.34	226.38	221.61	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:16:_Morro Bay-Mesa and Morro Bay-Diablo 230 kV Lines	P7	DCTL	246.6	238.0	236.5	203.3	203.2	202.5	123.2	221.1	240.6	233.8	239.4	232.0	236.1	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:17:_Morro Bay-Mesa and Diablo-Mesa 230 kV Lines	P7	DCTL	252.8	248.4	233.8	201.9	202.3	201.7	118.1	216.5	237.9	229.8	236.6	226.6	233.4	Project: Midway-Andrew 230 KV - Scope under review
36254 SN LS OB 115 36278 OCEANO 115 1 1	P2-4:A20:1:_MORROBAY 230kV - Section 2E & 1E	P2	Bus-tie breaker fault	167.0	153.6	152.4	131.2	130.7	129.1	99.5	147.8	155.0	154.7	153.0	162.6	151.4	Project: Midway-Andrew 230 KV - Scope under review
	MESA PGE 230/115kV TB 2 & MESA PGE 230/115kV TB 3	P6	N-1-1	171.86	168.51	167.61	153.29	153.18	153.9	<100	157.82	174.91	168.09	172.35	164.73	167.13	Project: Midway-Andrew 230 KV - Scope under review
	MORRO BAY-MESA 230kV & DIABLO-MESA 230kV	P6	N-1-1	177.52	171.41	170.14	156.05	155.86	156.46	91.52	162.22	175.22	171.14	175.12	170.48	169.6	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:16:_Morro Bay-Mesa and Morro Bay-Diablo 230 kV Lines	P7	DCTL	189.8	182.3	180.8	156.4	156.0	155.8	96.2	166.2	185.7	181.1	184.7	174.7	180.6	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:17:_Morro Bay-Mesa and Diablo-Mesa 230 kV Lines	P7	DCTL	189.7	191.1	179.0	155.8	155.7	155.9	91.6	162.2	184.0	178.3	182.9	170.1	178.7	Project: Midway-Andrew 230 KV - Scope under review
36256 MESA_PGE 115 36280 UNION OL 115 1 1	P2-4:A20:1:_MORROBAY 230kV - Section 2E & 1E	P2	Bus-tie breaker fault	177.7	157.3	156.9	104.8	104.4	101.7	105.0	152.4	152.7	155.0	149.8	163.8	155.9	Project: Midway-Andrew 230 KV - Scope under review
	MORRO BAY-MESA 230kV & DIABLO-MESA 230kV	P6	N-1-1	187.16	165.99	165.21	120.4	120.59	119.27	93.59	165.44	165.55	161.5	166.21	175.56	164.68	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:16:_Morro Bay-Mesa and Morro Bay-Diablo 230 kV Lines	P7	DCTL	201.3	182.8	181.9	123.1	122.9	121.7	97.4	170.4	179.1	177.3	177.4	180.5	181.3	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:17:_Morro Bay-Mesa and Diablo-Mesa 230 kV Lines	P7	DCTL	209.5	187.4	177.6	120.3	120.6	118.9	93.7	165.4	175.0	172.8	173.2	175.1	177.3	Project: Midway-Andrew 230 KV - Scope under review
36260 SISQUOC 115 36286 PALMR 115 1 1	P2-1:A20:21:_DIVIDE-CABRILLO #1 115kV [1380] (DIVVIDE-PURSMJ2)	P2	N-1 (Transmission Line)	93.9	92.6	94.6	75.6	77.6	80.9	53.0	71.0	98.5	89.3	100.7	77.9	94.7	Disable Automatics
	P2-1:A20:25:_DIVIDE-CABRILLO #1 115kV [1380] (SURF JCT-PURSMJ2)	P2	N-1 (Transmission Line)	94.0	92.6	94.6	75.7	77.6	81.0	53.1	71.1	98.6	89.3	100.7	78.0	94.8	Disable Automatics
	P2-3:A20:24:_DIVVIDE - MA 115kV & DIVIDE-CABRILLO #2 line	P2	Non-bus-tie breaker fault	122.1	124.8	126.1	100.1	101.9	105.1	80.4	101.9	131.2	122.1	132.8	109.3	126.3	Disable Automatics
	P2-4:A20:5:_MESA_PGE 115kV - Section 2D & 1D	P2	Bus-tie breaker fault	153.4	151.3	150.8	98.5	96.7	92.6	163.4	129.1	140.0	147.9	133.9	137.0	150.8	Project: Midway-Andrew 230 KV - Scope under review
	MESA-DIVIDE #1 115kV & MESA-DIVIDE #2 115kV	P6	N-1-1	240.34	206.58	206.77	184.81	202.12	217.46	127.45	167.51	223.5	250.01	222.3	182.17	206.57	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:6:_Mesa-Divide #1 and #2 115 kV Lines	P7	DCTL	282.1	279.6	280.4	189.9	212.7	216.2	127.4	167.6	241.4	268.8	224.3	180.8	280.4	Project: Midway-Andrew 230 KV - Scope under review



Thermal Overloads

Monitored Facility	Cont Name	Category	Category Description	Loading % (Baseline Scenarios)								Loading % (Sensitivity Scenarios)					Project & Potential Mitigation Solutions
				2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Winter Peak	2022 Winter Peak	2027 Winter Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022 SP High CEC Forecast	2019 SP Peak-Shift	2027 SP Peak-Shift	2022 SP Heavy Renewable & Min Gas Gen	2027 Retirement of QF Generations	
36264 S.YNZ JT 115 36288 ZACA 115 1 1	P2-3:A20:24:_DIVVIDE - MA 115kV & DIVIDE-CABRILLO #2 line	P2	Non-bus-tie breaker fault	109.6	112.6	114.5	89.6	91.6	94.8	70.7	90.2	118.8	109.2	120.7	97.7	114.7	Disable Automatics
	P2-4:A20:5:_MESA_PGE 115kV - Section 2D & 1D	P2	Bus-tie breaker fault	151.0	146.7	146.3	86.6	86.4	82.4	152.8	116.6	128.1	143.3	122.5	124.5	146.1	Project: Midway-Andrew 230 KV - Scope under review
	MESA-DIVIDE #1 115kV & MESA-DIVIDE #2 115kV	P6	N-1-1	243.96	205.15	205.87	184.76	202.89	218.47	124.42	164.82	223.19	255.32	221.87	180.35	205.68	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:6:_Mesa-Divide #1 and #2 115 kV Lines	P7	DCTL	291.5	286.9	288.4	190.4	214.8	217.4	124.3	164.9	243.7	276.1	224.1	179.0	288.5	Project: Midway-Andrew 230 KV - Scope under review
36264 S.YNZ JT 115 36294 CABRILLO 115 1 1	P7-1:A20:6:_Mesa-Divide #1 and #2 115 kV Lines	P7	DCTL	100.3	101.2	99.7	64.1	71.8	69.8	45.7	59.0	81.9	99.0	71.2	62.2	99.5	Project: Midway-Andrew 230 KV - Scope under review
36266 SNTA MRA 115 36269 FRWAYTP 115 1 1	P2-4:A20:5:_MESA_PGE 115kV - Section 2D & 1D	P2	Bus-tie breaker fault	147.2	142.2	143.2	114.7	112.5	108.5	142.6	127.5	136.0	140.3	132.0	130.0	143.3	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:6:_Mesa-Divide #1 and #2 115 kV Lines	P7	DCTL	114.4	113.1	113.7	90.4	101.9	102.8	52.3	68.7	96.2	108.6	89.8	72.1	113.7	Project: Midway-Andrew 230 KV - Scope under review
36278 OCEANO 115 36280 UNION OL 115 1 1	P2-4:A20:1:_MORROBAY 230kV - Section 2E & 1E	P2	Bus-tie breaker fault	174.1	149.4	148.1	96.9	95.9	91.5	100.8	149.1	145.5	147.5	140.5	162.5	147.0	Project: Midway-Andrew 230 KV - Scope under review
	MESA PGE 230/115kV TB 2 & MESA PGE 230/115kV TB 3	P6	N-1-1	182.06	156.08	155.32	108.85	107.95	105.09	<100	161.58	159.34	152.8	154.15	170.22	154.93	Project: Midway-Andrew 230 KV - Scope under review
	MORRO BAY-MESA 230kV & DIABLO-MESA 230kV	P6	N-1-1	187.74	162.6	161.22	116.52	116.42	112.48	90.03	176.63	163	158.46	160.29	175	160.49	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:16:_Morro Bay-Mesa and Morro Bay-Diablo 230 kV Lines	P7	DCTL	201.3	178.7	176.9	118.4	117.4	114.7	96.1	169.8	176.5	174.0	172.4	180.6	176.4	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:17:_Morro Bay-Mesa and Diablo-Mesa 230 kV Lines	P7	DCTL	210.0	185.5	173.3	116.1	115.4	112.2	90.1	165.5	172.8	170.3	168.6	175.3	173.0	Project: Midway-Andrew 230 KV - Scope under review
36286 PALMR 115 36287 AECCEORTP 115 1 1	P2-3:A20:24:_DIVVIDE - MA 115kV & DIVIDE-CABRILLO #2 line	P2	Non-bus-tie breaker fault	116.9	119.7	121.4	94.7	96.5	99.6	76.0	97.5	125.6	116.8	127.6	104.9	121.6	Disable Automatics
	P2-4:A20:5:_MESA_PGE 115kV - Section 2D & 1D	P2	Bus-tie breaker fault	149.4	146.1	146.7	92.9	90.9	87.4	157.1	123.8	133.7	143.2	128.8	131.5	146.8	Project: Midway-Andrew 230 KV - Scope under review
	MESA-DIVIDE #1 115kV & MESA-DIVIDE #2 115kV	P6	N-1-1	235.33	201.21	201.92	178.9	195.86	210.61	123.18	163.01	217.63	244.92	216.85	177.53	201.73	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:6:_Mesa-Divide #1 and #2 115 kV Lines	P7	DCTL	276.9	274.1	275.5	184.1	206.6	209.9	123.1	163.1	235.5	263.7	218.9	176.2	275.5	Project: Midway-Andrew 230 KV - Scope under review
36287 AECCEORTP 115 36288 ZACA 115 1 1	P2-3:A20:24:_DIVVIDE - MA 115kV & DIVIDE-CABRILLO #2 line	P2	Non-bus-tie breaker fault	102.3	104.9	106.7	83.1	84.9	88.0	65.0	82.9	110.8	102.2	112.8	90.3	106.9	Disable Automatics
	P2-4:A20:5:_MESA_PGE 115kV - Section 2D & 1D	P2	Bus-tie breaker fault	136.0	132.7	132.9	81.4	79.6	76.3	138.1	106.4	118.6	129.6	113.9	114.2	132.5	Project: Midway-Andrew 230 KV - Scope under review
	MESA-DIVIDE #1 115kV & MESA-DIVIDE #2 115kV	P6	N-1-1	218.84	185.32	186.05	165.71	181.92	195.67	111.37	147.55	201.54	228.65	200.76	161.9	185.87	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:6:_Mesa-Divide #1 and #2 115 kV Lines	P7	DCTL	260.1	256.7	258.0	170.7	192.2	195.1	111.3	147.7	219.2	246.9	202.7	160.7	258.0	Project: Midway-Andrew 230 KV - Scope under review
36303 GLDTRJC1 115 36251 FTHILTP2 115 1 1	P2-4:A20:1:_MORROBAY 230kV - Section 2E & 1E	P2	Bus-tie breaker fault	112.8	110.5	110.4	85.1	85.5	85.6	51.5	98.1	113.5	109.9	113.0	84.5	110.1	Project: Midway-Andrew 230 KV - Scope under review
	MESA PGE 230/115kV TB 2 & MESA PGE 230/115kV TB 3	P6	N-1-1	117.74	117.78	117.85	96.06	96.74	98.55	<100	107.22	123.13	116.04	122.84	91.55	117.75	Project: Midway-Andrew 230 KV - Scope under review
	MORRO BAY-MESA 230kV & DIABLO-MESA 230kV	P6	N-1-1	120.35	119.65	119.49	97.87	98.49	100.35	<100	108.85	124.31	118.12	124.72	93.53	119.39	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:16:_Morro Bay-Mesa and Morro Bay-Diablo 230 kV Lines	P7	DCTL	127.2	125.5	125.4	98.5	99.1	100.6	52.7	111.2	129.9	124.1	129.8	98.0	125.3	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:17:_Morro Bay-Mesa and Diablo-Mesa 230 kV Lines	P7	DCTL	107.2	108.0	123.8	97.7	98.4	100.1	50.5	108.8	128.5	122.1	128.3	96.3	123.8	Project: Midway-Andrew 230 KV - Scope under review
36304 GLDTRJC2 115 36253 FTHILTP1 115 1 1	P2-4:A20:1:_MORROBAY 230kV - Section 2E & 1E	P2	Bus-tie breaker fault	120.4	117.9	117.9	95.6	96.2	96.3	56.0	104.1	121.9	117.2	121.5	89.6	117.6	Project: Midway-Andrew 230 KV - Scope under review
	MESA PGE 230/115kV TB 2 & MESA PGE 230/115kV TB 3	P6	N-1-1	124.22	124.09	124.24	104.82	105.83	108.21	<100	112.41	130.13	122.19	129.98	95.94	124.15	Project: Midway-Andrew 230 KV - Scope under review
	MORRO BAY-MESA 230kV & DIABLO-MESA 230kV	P6	N-1-1	126.96	126.04	125.95	106.74	107.67	110.12	<100	114.13	131.49	124.36	131.94	97.98	125.86	Project: Midway-Andrew 230 KV - Scope under review

Thermal Overloads

Monitored Facility	Cont Name	Category	Category Description	Loading % (Baseline Scenarios)								Loading % (Sensitivity Scenarios)					Project & Potential Mitigation Solutions
				2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Winter Peak	2022 Winter Peak	2027 Winter Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022 SP High CEC Forecast	2019 SP Peak-Shift	2027 SP Peak-Shift	2022 SP Heavy Renewable & Min Gas Gen	2027 Retirement of QF Generations	
	P7-1:A20:16: _Morro Bay-Mesa and Morro Bay-Diablo 230 kV Lines	P7	DCTL	133.8	131.7	131.7	107.6	108.5	110.6	57.0	116.6	137.0	130.3	136.9	102.6	131.7	Project: Midway-Andrew 230 KV - Scope under review
	P7-1:A20:17: _Morro Bay-Mesa and Diablo-Mesa 230 kV Lines	P7	DCTL	113.3	113.8	130.0	106.6	107.6	109.9	54.8	114.1	135.4	128.2	135.2	100.9	130.0	Project: Midway-Andrew 230 KV - Scope under review
36310 TEMPLT7 70.0 36316 TEMPL J2 70.0 1 1	P2-4:A20:2: _MORROBAY 230kV - Section 2E & 2D	P2	Bus-tie breaker fault	64.5	66.5	66.1	135.7	137.5	139.4	39.6	35.9	142.6	135.3	143.8	55.6	65.6	Project: Midway-Andrew 230 KV - Scope under review
36316 TEMPL J2 70.0 36358 ATASCDRO 70.0 1 1	P2-4:A20:2: _MORROBAY 230kV - Section 2E & 2D	P2	Bus-tie breaker fault	64.5	66.5	66.1	135.7	137.5	139.4	39.6	35.9	142.5	135.3	143.9	55.6	65.6	Project: Midway-Andrew 230 KV - Scope under review
36358 ATASCDRO 70.0 36362 CACOS J2 70.0 1 1	P2-4:A20:2: _MORROBAY 230kV - Section 2E & 2D	P2	Bus-tie breaker fault	55.4	56.8	54.9	113.5	116.4	117.1	41.6	40.1	130.7	121.8	130.0	48.7	54.5	Project: Midway-Andrew 230 KV - Scope under review
36362 CACOS J2 70.0 36364 CAYUCOS 70.0 1 1	P2-4:A20:2: _MORROBAY 230kV - Section 2E & 2D	P2	Bus-tie breaker fault	55.1	56.6	54.7	113.4	116.4	117.1	41.3	39.9	130.7	121.8	130.0	48.4	54.2	Project: Midway-Andrew 230 KV - Scope under review

2017-2018 ISO Reliability Assessment - Study Results

Study Area: PG&E Central Coast  
PG&E Los Padres



High/Low Voltages

				Loading % (Baseline Scenarios)								Loading % (Sensitivity Scenarios)					Project & Potential Mitigation Solutions
Substation	Cont Name	Caegory	Category Description	2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Winter Peak	2022 Winter Peak	2027 Winter Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022 SP High CEC Forecast	2019 SP Peak-Shift	2027 SP Peak-Shift	2022 SP Heavy Renewable & Min Gas Gen	2027 Retirement of QF Generations	
9 ST JCT 60	Base Case	P0	Normal	1.06	0.97	0.97	0.99	0.99	0.98	1.05	1.01	0.97	0.98	0.97	1.00	0.97	Load power factor correction and voltage support if needed
AGRCJCT 70	Base Case	P0	Normal	1.07	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.03	1.03	1.03	1.04	1.03	Load power factor correction and voltage support if needed
AGRICO 70	Base Case	P0	Normal	1.07	1.03	1.03	1.04	1.03	1.03	1.04	1.04	1.04	1.03	1.04	1.04	1.03	Load power factor correction and voltage support if needed
AGRILINK 60	Base Case	P0	Normal	1.07	1.04	1.04	1.03	1.04	1.03	1.06	1.05	1.04	1.04	1.04	1.05	1.04	Load power factor correction and voltage support if needed
AIRPROD 115	Base Case	P0	Normal	1.05	1.04	1.03	1.05	1.05	1.05	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
AIRWAYJ1 115	Base Case	P0	Normal	1.03	1.02	1.02	1.04	1.04	1.04	1.06	1.05	1.02	1.02	1.02	1.02	1.02	Load power factor correction and voltage support if needed
AIRWAYJ2 115	Base Case	P0	Normal	1.04	1.03	1.03	1.04	1.04	1.04	1.06	1.04	1.02	1.03	1.03	1.03	1.03	Load power factor correction and voltage support if needed
AIRWAYS 115	Base Case	P0	Normal	1.04	1.03	1.02	1.04	1.04	1.04	1.06	1.04	1.02	1.03	1.02	1.03	1.02	Load power factor correction and voltage support if needed
AIRWAYS2 115	Base Case	P0	Normal	1.03	1.02	1.02	1.04	1.04	1.04	1.06	1.05	1.02	1.02	1.02	1.02	1.02	Load power factor correction and voltage support if needed
ALPAUGH 115	Base Case	P0	Normal	1.05	1.03	1.03	1.03	1.02	1.03	1.05	1.05	1.03	1.05	1.03	1.03	1.03	Load power factor correction and voltage support if needed
ALPAUGHN_20P115	Base Case	P0	Normal	1.05	1.03	1.03	1.03	1.03	1.03	1.05	1.05	1.03	1.05	1.03	1.03	1.03	Load power factor correction and voltage support if needed
ALPAUGHN_50P115	Base Case	P0	Normal	1.05	1.03	1.03	1.03	1.03	1.03	1.05	1.05	1.03	1.05	1.03	1.03	1.03	Load power factor correction and voltage support if needed
ALPAUGHN_JCT115	Base Case	P0	Normal	1.05	1.03	1.03	1.03	1.03	1.03	1.05	1.05	1.03	1.05	1.03	1.03	1.03	Load power factor correction and voltage support if needed
ALPAUGHNRTH 115	Base Case	P0	Normal	1.05	1.03	1.03	1.03	1.03	1.03	1.05	1.05	1.03	1.05	1.03	1.03	1.03	Load power factor correction and voltage support if needed
ANGIOLA 70	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.05	1.08	1.07	1.03	1.03	1.03	1.05	1.03	Load power factor correction and voltage support if needed
ATWELL&1 115	Base Case	P0	Normal	1.04	1.03	1.03	1.03	1.03	1.03	1.05	1.04	1.03	1.04	1.03	1.02	1.03	Load power factor correction and voltage support if needed
ATWELL_JCT 115	Base Case	P0	Normal	1.05	1.03	1.03	1.03	1.03	1.03	1.05	1.05	1.03	1.05	1.03	1.03	1.03	Load power factor correction and voltage support if needed
BA FOOD1 60	Base Case	P0	Normal	1.05	1.04	1.04	1.04	1.04	1.03	1.06	1.03	1.04	1.04	1.04	1.04	1.02	Load power factor correction and voltage support if needed
BA FOOD2 60	Base Case	P0	Normal	1.05	1.04	1.04	1.04	1.04	1.03	1.06	1.03	1.04	1.04	1.04	1.04	1.02	Load power factor correction and voltage support if needed
BALCH 115	Base Case	P0	Normal	1.06	1.04	1.04	1.05	1.05	1.05	1.07	1.05	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
BARTON 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.04	1.06	1.04	1.02	1.03	1.03	1.03	1.03	Load power factor correction and voltage support if needed
BCKWRTH 69	Base Case	P0	Normal	1.06	1.05	1.02	1.04	1.04	0.99	1.09	1.05	1.05	1.03	1.05	1.04	1.02	Load power factor correction and voltage support if needed
BIG BASN 60	Base Case	P0	Normal	1.00	1.01	1.01	1.02	1.00	1.00	1.08	1.03	1.00	1.02	1.01	1.02	1.01	Load power factor correction and voltage support if needed
BIOLA 70	Base Case	P0	Normal	1.06	1.03	1.02	1.03	1.03	1.03	1.05	1.03	1.02	1.02	1.02	1.03	1.02	Load power factor correction and voltage support if needed
BOSWELL 70	Base Case	P0	Normal	1.05	1.04	1.04	1.04	1.05	1.05	1.08	1.07	1.04	1.04	1.04	1.05	1.04	Load power factor correction and voltage support if needed
BSWLL TP 70	Base Case	P0	Normal	1.05	1.04	1.04	1.04	1.05	1.05	1.08	1.07	1.04	1.04	1.04	1.05	1.04	Load power factor correction and voltage support if needed
BULLARD 115	Base Case	P0	Normal	1.02	1.02	1.02	1.04	1.04	1.04	1.05	1.04	1.01	1.02	1.02	1.02	1.02	Load power factor correction and voltage support if needed
BURNS 60	Base Case	P0	Normal	1.00	1.01	1.01	1.02	1.00	0.99	1.08	1.03	1.00	1.02	1.00	1.02	1.01	Load power factor correction and voltage support if needed
BURNS J1 60	Base Case	P0	Normal	1.00	1.01	1.01	1.02	1.00	0.99	1.08	1.03	1.00	1.02	1.00	1.02	1.01	Load power factor correction and voltage support if needed
BURNS J2 60	Base Case	P0	Normal	1.00	1.01	1.01	1.02	1.00	0.99	1.08	1.03	1.00	1.02	1.00	1.02	1.01	Load power factor correction and voltage support if needed
CAL AVE 115	Base Case	P0	Normal	1.05	1.03	1.02	1.04	1.04	1.04	1.06	1.05	1.02	1.03	1.02	1.02	1.02	Load power factor correction and voltage support if needed
CAMDEN 70	Base Case	P0	Normal	1.06	1.00	0.99	1.02	1.02	1.02	1.06	1.04	0.99	1.00	0.99	1.00	0.99	Load power factor correction and voltage support if needed
CAMPHORA 60	Base Case	P0	Normal	1.05	0.98	0.98	0.99	1.00	0.99	1.05	1.01	0.98	0.99	0.98	1.00	0.98	Load power factor correction and voltage support if needed
CARTWRT 115	Base Case	P0	Normal	1.08	1.06	1.12	1.05	1.05	1.05	1.26	1.12	1.06	1.05	1.11	1.11	1.12	Load power factor correction and voltage support if needed
CHILCT 69	Base Case	P0	Normal	1.05	1.03	1.01	1.02	1.02	0.99	1.07	1.03	1.03	1.02	1.03	1.03	1.00	Load power factor correction and voltage support if needed
CHLDHOSP 115	Base Case	P0	Normal	1.04	1.03	1.03	1.04	1.04	1.04	1.06	1.04	1.03	1.03	1.03	1.03	1.03	Load power factor correction and voltage support if needed
CHVSANARDO 60	COBURN-OIL FIELDS #2 60kV & COBURN 230/60kV TB 1	P6	N-1-1	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	Turn on SALNR GN (36201) and it resolves the voltage issues. Proposal to install shunt capacitors at OIL Fields that would mitigate these low voltage issues. SARGCN (36200) Generating unit was retired jan-01,2017.
CIC JCT 60	Base Case	P0	Normal	1.07	1.04	1.04	1.04	1.04	1.03	1.06	1.05	1.04	1.04	1.04	1.05	1.04	Load power factor correction and voltage support if needed
	GRN VLY1 115/60kV TB 1 & MOSS LANDING-CRAZY HORSE CANYON #1 115kV [2930] MOAS OPENED on PRNDL J1_PRUNEDLE	P6	N-1-1	>0.9	0.91	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & MOSS LANDING-CRAZY HORSE CANYON #2 115kV	P6	N-1-1	>0.9	0.91	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & SALINAS-MOSSLSNW-DOLAN RD 115kV	P6	N-1-1	>0.9	0.91	0.91	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	0.91	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & MOSS LANDING-SALINAS #2 115kV	P6	N-1-1	>0.9	0.91	0.91	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	0.91	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & SALINAS 115/60kV TB 2	P6	N-1-1	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & SALINAS 115/60kV TB 2	P6	N-1-1	>0.9	0.91	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
CLOVIS-1 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.03	1.03	1.03	1.03	1.03	Load power factor correction and voltage support if needed
CLOVIS-2 115	Base Case	P0	Normal	1.04	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.02	1.03	1.03	1.03	1.02	Load power factor correction and voltage support if needed
CLOVISJ1 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
CLOVISJ2 115	Base Case	P0	Normal	1.04	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.03	1.03	1.03	1.03	1.03	Load power factor correction and voltage support if needed

2017-2018 ISO Reliability Assessment - Study Results

Study Area: PG&E Central Coast  
PG&E Los Padres



High/Low Voltages

				Loading % (Baseline Scenarios)								Loading % (Sensitivity Scenarios)					Project & Potential Mitigation Solutions
Substation	Cont Name	Caegory	Category Description	2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Winter Peak	2022 Winter Peak	2027 Winter Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022 SP High CEC Forecast	2019 SP Peak-Shift	2027 SP Peak-Shift	2022 SP Heavy Renewable & Min Gas Gen	2027 Retirement of QF Generations	
CMPHR J1 60	Base Case	P0	Normal	1.06	0.97	0.97	0.99	0.99	0.99	1.05	1.01	0.98	0.99	0.98	1.00	0.97	Load power factor correction and voltage support if needed
CMPHR J2 60	Base Case	P0	Normal	1.05	0.98	0.98	0.99	1.00	0.99	1.05	1.01	0.98	0.99	0.98	1.00	0.98	Load power factor correction and voltage support if needed
COBURN 60	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.03	1.06	1.03	1.03	1.04	1.03	1.03	1.02	Load power factor correction and voltage support if needed
COBURN J 60	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.02	1.06	1.03	1.03	1.04	1.03	1.03	1.02	Load power factor correction and voltage support if needed
CORCORAN 115	Base Case	P0	Normal	1.04	1.03	1.02	1.03	1.03	1.03	1.06	1.05	1.02	1.02	1.02	1.04	1.02	Load power factor correction and voltage support if needed
CORCORAN 70	Base Case	P0	Normal	1.06	1.04	1.04	1.05	1.05	1.05	1.08	1.07	1.04	1.04	1.04	1.05	1.04	Load power factor correction and voltage support if needed
CORCORANPV_P115	Base Case	P0	Normal	1.04	1.03	1.03	1.03	1.03	1.04	1.06	1.05	1.03	1.02	1.03	1.04	1.03	Load power factor correction and voltage support if needed
CRUSHER 60	Base Case	P0	Normal	1.00	1.00	1.01	1.01	1.00	0.99	1.08	1.02	0.99	1.01	1.00	1.01	1.01	Load power factor correction and voltage support if needed
DANISHCM 115	Base Case	P0	Normal	1.05	1.03	1.02	1.04	1.04	1.04	1.06	1.05	1.02	1.03	1.02	1.03	1.02	Load power factor correction and voltage support if needed
DINUBA 70	Base Case	P0	Normal	1.07	1.02	1.02	1.03	1.03	1.03	1.06	1.06	1.02	1.03	1.02	1.02	1.02	Load power factor correction and voltage support if needed
DIVIDE 70	Base Case	P0	Normal	1.02	1.04	1.04	1.03	1.03	1.02	1.03	1.03	1.04	1.03	1.03	1.03	1.03	Load power factor correction and voltage support if needed
DNUBAEGY 70	Base Case	P0	Normal	1.08	1.03	1.03	1.04	1.04	1.04	1.07	1.06	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
DNUBAJCT 70	Base Case	P0	Normal	1.08	1.03	1.03	1.04	1.04	1.04	1.07	1.06	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
DUNLAP 70	Base Case	P0	Normal	1.06	1.01	1.00	1.02	1.02	1.02	1.05	1.05	1.00	1.01	1.00	1.01	1.00	Load power factor correction and voltage support if needed
ERTA 60	Base Case	P0	Normal	1.07	1.04	1.05	1.04	1.04	1.04	1.06	1.05	1.04	1.04	1.05	1.05	1.05	Load power factor correction and voltage support if needed
	GRN VLY1 115/60kV TB 1 & MOSS LANDING-CRAZY HORSE CANYON #1 115kV [2930] MOAS OPENED on PRNDL J1_PRUNEDLE	P6	N-1-1	>0.9	0.90	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & MOSS LANDING-CRAZY HORSE CANYON #2 115kV	P6	N-1-1	>0.9	0.90	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & SALINAS-MOSSLSNW-DOLAN RD 115kV	P6	N-1-1	>0.9	0.90	0.91	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	0.91	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & MOSS LANDING-SALINAS #2 115kV	P6	N-1-1	>0.9	0.90	0.91	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	0.91	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & SALINAS 115/60kV TB 2	P6	N-1-1	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & SALINAS 115/60kV TB 2	P6	N-1-1	>0.9	0.90	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
ERTA JCT 60	Base Case	P0	Normal	1.07	1.04	1.05	1.04	1.04	1.04	1.06	1.05	1.04	1.04	1.05	1.05	1.05	Load power factor correction and voltage support if needed
	GRN VLY1 115/60kV TB 1 & MOSS LANDING-CRAZY HORSE CANYON #1 115kV [2930] MOAS OPENED on PRNDL J1_PRUNEDLE	P6	N-1-1	>0.9	0.90	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & MOSS LANDING-CRAZY HORSE CANYON #2 115kV	P6	N-1-1	>0.9	0.90	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & SALINAS-MOSSLSNW-DOLAN RD 115kV	P6	N-1-1	>0.9	0.90	0.91	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	0.91	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & MOSS LANDING-SALINAS #2 115kV	P6	N-1-1	>0.9	0.90	0.91	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	0.91	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & SALINAS 115/60kV TB 2	P6	N-1-1	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & SALINAS 115/60kV TB 2	P6	N-1-1	>0.9	0.90	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
GATES 115	Base Case	P0	Normal	1.09	1.10	1.09	1.10	1.10	1.10	1.10	1.09	1.10	1.11	1.10	1.09	1.09	Load power factor correction and voltage support if needed
GAURD J1 115	Base Case	P0	Normal	1.05	1.04	1.04	1.05	1.05	1.05	1.06	1.05	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
GAURD J2 115	Base Case	P0	Normal	1.05	1.04	1.04	1.05	1.05	1.05	1.06	1.05	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
GFFNJCT 70	Base Case	P0	Normal	1.06	1.03	1.03	1.04	1.03	1.03	1.05	1.04	1.03	1.04	1.03	1.04	1.03	Load power factor correction and voltage support if needed
GIFFEN 70	Base Case	P0	Normal	1.07	1.03	1.03	1.03	1.02	1.02	1.05	1.04	1.02	1.03	1.02	1.06	1.02	Load power factor correction and voltage support if needed
GNZLSJCT 60	Base Case	P0	Normal	1.05	0.98	0.98	0.99	1.00	0.99	1.05	1.01	0.98	0.99	0.98	1.00	0.98	Load power factor correction and voltage support if needed
GONZALES 60	Base Case	P0	Normal	1.06	0.97	0.97	0.99	0.99	0.98	1.05	1.01	0.97	0.98	0.97	0.99	0.97	Load power factor correction and voltage support if needed
GRAEGL 69	Base Case	P0	Normal	1.07	1.06	1.02	1.05	1.05	1.00	1.09	1.06	1.06	1.04	1.06	1.05	1.02	Load power factor correction and voltage support if needed
GRAEGL69 69	Base Case	P0	Normal	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	Load power factor correction and voltage support if needed
GRAEGL69 69	Base Case	P0	Normal	1.07	1.05	1.02	1.05	1.05	1.00	1.09	1.06	1.05	1.04	1.05	1.05	1.02	Load power factor correction and voltage support if needed
GRDN GLS 115	Base Case	P0	Normal	1.05	1.04	1.04	1.05	1.05	1.05	1.06	1.05	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
GRDNGLS2 115	Base Case	P0	Normal	1.05	1.04	1.04	1.05	1.05	1.05	1.06	1.05	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
	Base Case	P0	Normal	1.07	1.05	1.05	1.05	1.05	1.05	1.07	1.06	1.05	1.05	1.05	1.06	1.05	Load power factor correction and voltage support if needed
	GRN VLY1 115/60kV TB 1 & MOSS LANDING-CRAZY HORSE CANYON #1 115kV [2930] MOAS OPENED on PRNDL J1_PRUNEDLE	P6	N-1-1	>0.9	0.90	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & MOSS LANDING-CRAZY HORSE CANYON #2 115kV	P6	N-1-1	>0.9	0.90	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.



2017-2018 ISO Reliability Assessment - Study Results

Study Area: PG&E Central Coast  
PG&E Los Padres



High/Low Voltages

				Loading % (Baseline Scenarios)								Loading % (Sensitivity Scenarios)					Project & Potential Mitigation Solutions
Substation	Cont Name	Caegory	Category Description	2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Winter Peak	2022 Winter Peak	2027 Winter Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022 SP High CEC Forecast	2019 SP Peak-Shift	2027 SP Peak-Shift	2022 SP Heavy Renewable & Min Gas Gen	2027 Retirement of QF Generations	
GREN VLY 60	GRN VLY1 115/60kV TB 1 & SALINAS-MOSSLSNW-DOLAN RD 115kV	P6	N-1-1	>0.9	0.90	0.91	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	0.91	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & MOSS LANDING-SALINAS #2 115kV	P6	N-1-1	>0.9	0.90	0.91	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	0.91	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & SALINAS 115/60kV TB 2	P6	N-1-1	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
	GRN VLY1 115/60kV TB 1 & SALINAS 115/60kV TB 2	P6	N-1-1	>0.9	0.90	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	0.90	>0.9	0.91	>0.9	>0.9	Project: Watsonville 60 KV to 115 KV Voltage conversion.
HARDWICK 70	Base Case	P0	Normal	1.05	1.02	1.02	1.04	1.04	1.04	1.06	1.05	1.02	1.02	1.02	1.02	1.02	Load power factor correction and voltage support if needed
HELM 70	Base Case	P0	Normal	1.05	1.04	1.04	1.04	1.04	1.04	1.05	1.05	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
HERNDON 115	Base Case	P0	Normal	1.04	1.03	1.03	1.04	1.04	1.04	1.05	1.04	1.03	1.03	1.03	1.03	1.03	Load power factor correction and voltage support if needed
HNFRD SW 70	Base Case	P0	Normal	1.05	1.03	1.02	1.04	1.04	1.04	1.06	1.05	1.02	1.03	1.02	1.03	1.02	Load power factor correction and voltage support if needed
HRDWK TP 70	Base Case	P0	Normal	1.05	1.03	1.02	1.04	1.04	1.04	1.06	1.05	1.02	1.03	1.02	1.03	1.02	Load power factor correction and voltage support if needed
IBM-CTLE 115	Base Case	P0	Normal	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	<1.05	Load power factor correction and voltage support if needed
IBM-CTLE 115	Base Case	P0	Normal	1.06	1.04	1.05	1.04	1.05	1.04	1.09	1.05	1.04	1.05	1.04	1.05	1.05	Load power factor correction and voltage support if needed
INDUSTRL 60	Base Case	P0	Normal	1.07	1.01	1.01	1.02	1.01	1.02	1.07	1.01	1.02	1.01	1.02	1.02	1.01	Load power factor correction and voltage support if needed
JENNY 115	Base Case	P0	Normal	1.07	1.03	1.04	1.01	1.03	1.03	1.08	1.04	1.04	1.02	1.04	1.04	1.04	Load power factor correction and voltage support if needed
JGBSWLL 70	Base Case	P0	Normal	1.05	1.04	1.04	1.04	1.05	1.05	1.08	1.07	1.04	1.04	1.04	1.05	1.04	Load power factor correction and voltage support if needed
JOLON 60	Base Case	P0	Normal	1.05	1.02	1.02	1.03	1.03	1.02	1.06	1.03	1.02	1.03	1.02	1.02	1.01	Load power factor correction and voltage support if needed
JOLON TP 60	Base Case	P0	Normal	1.06	1.03	1.03	1.03	1.03	1.02	1.06	1.03	1.03	1.03	1.03	1.03	1.02	Load power factor correction and voltage support if needed
KCOGNJCT 115	Base Case	P0	Normal	1.05	1.04	1.04	1.05	1.05	1.05	1.06	1.05	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
KCTY_TAP 60	Base Case	P0	Normal	1.05	1.04	1.04	1.04	1.04	1.03	1.06	1.03	1.04	1.04	1.04	1.04	1.02	Load power factor correction and voltage support if needed
KERCKHF1 115	Base Case	P0	Normal	1.05	1.04	1.04	1.05	1.05	1.04	1.06	1.05	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
KERCKHF2 115	Base Case	P0	Normal	1.05	1.04	1.04	1.05	1.05	1.04	1.06	1.05	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
KERMAN1 70	Base Case	P0	Normal	1.07	1.03	1.03	1.03	1.03	1.03	1.04	1.04	1.03	1.03	1.03	1.03	1.03	Load power factor correction and voltage support if needed
KING CTY 60	Base Case	P0	Normal	1.05	1.03	1.03	1.03	1.03	1.02	1.06	1.03	1.03	1.03	1.03	1.03	1.02	Load power factor correction and voltage support if needed
KINGS J1 115	Base Case	P0	Normal	1.05	1.04	1.04	1.05	1.05	1.05	1.06	1.05	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
KINGS J2 115	Base Case	P0	Normal	1.05	1.04	1.04	1.05	1.05	1.05	1.06	1.05	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
KINGSBRG 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
KNGLOBUS 70	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.03	1.03	1.03	1.03	1.03	Load power factor correction and voltage support if needed
KNGSCOGN 115	Base Case	P0	Normal	1.05	1.04	1.04	1.05	1.05	1.05	1.06	1.05	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
KNGSRVR1 115	Base Case	P0	Normal	1.06	1.04	1.04	1.05	1.05	1.05	1.06	1.05	1.04	1.05	1.04	1.04	1.04	Load power factor correction and voltage support if needed
KRCDP 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.05	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
L.STAR J 60	Base Case	P0	Normal	1.00	1.01	1.01	1.01	1.00	0.99	1.08	1.03	1.00	1.01	1.00	1.02	1.01	Load power factor correction and voltage support if needed
LASPALMS 115	Base Case	P0	Normal	1.03	1.02	1.02	1.04	1.04	1.04	1.06	1.05	1.02	1.02	1.02	1.02	1.02	Load power factor correction and voltage support if needed
LCCHS J1 60	Base Case	P0	Normal	1.05	1.02	1.02	1.03	1.03	1.02	1.06	1.02	1.02	1.02	1.02	1.02	1.01	Load power factor correction and voltage support if needed
LCCHS J2 60	Base Case	P0	Normal	1.06	1.03	1.03	1.03	1.03	1.02	1.06	1.02	1.03	1.03	1.03	1.03	1.01	Load power factor correction and voltage support if needed
LODI 230	Base Case	P0	Normal	1.02	1.00	1.00	1.01	1.01	1.00	1.05	1.02	1.00	1.00	1.00	1.00	1.00	Load power factor correction and voltage support if needed
LODI EC 230	Base Case	P0	Normal	1.02	1.00	1.00	1.01	1.01	1.00	1.05	1.02	1.00	1.00	1.00	1.00	1.00	Load power factor correction and voltage support if needed
LONE STR 60	Base Case	P0	Normal	1.00	1.01	1.01	1.01	1.00	0.99	1.08	1.03	1.00	1.01	1.00	1.02	1.01	Load power factor correction and voltage support if needed
LOS CCHS 60	Base Case	P0	Normal	1.05	1.02	1.02	1.03	1.03	1.02	1.06	1.02	1.02	1.02	1.02	1.02	1.01	Load power factor correction and voltage support if needed
LOS OSTS 60	Base Case	P0	Normal	1.06	1.03	1.03	1.03	1.03	1.02	1.06	1.02	1.03	1.03	1.03	1.03	1.01	Load power factor correction and voltage support if needed
MALAGA 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.05	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
MALAGATP 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.05	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
MANCHSTR 115	Base Case	P0	Normal	1.03	1.02	1.02	1.04	1.04	1.04	1.06	1.05	1.02	1.02	1.02	1.02	1.02	Load power factor correction and voltage support if needed
MARBLE 69	Base Case	P0	Normal	1.06	1.05	1.02	1.05	1.04	1.00	1.09	1.05	1.05	1.03	1.05	1.05	1.02	Load power factor correction and voltage support if needed
MC CALL 115	Base Case	P0	Normal	1.06	1.04	1.04	1.05	1.05	1.05	1.06	1.06	1.04	1.05	1.04	1.04	1.04	Load power factor correction and voltage support if needed
MCLANE 60	Base Case	P0	Normal	1.08	1.01	1.01	1.01	1.01	1.02	1.08	1.01	1.01	1.00	1.02	1.01	1.01	Load power factor correction and voltage support if needed
MOHAWK 69	Base Case	P0	Normal	1.07	1.06	1.02	1.06	1.05	1.00	1.09	1.06	1.06	1.05	1.06	1.06	1.02	Load power factor correction and voltage support if needed
OLIVE_SS 115	Base Case	P0	Normal	1.05	1.03	1.03	1.03	1.03	1.03	1.05	1.05	1.03	1.05	1.03	1.03	1.03	Load power factor correction and voltage support if needed
ORCHRD J 60	Base Case	P0	Normal	1.06	1.03	1.03	1.04	1.03	1.02	1.06	1.03	1.03	1.03	1.03	1.03	1.02	Load power factor correction and voltage support if needed
OROSI 70	Base Case	P0	Normal	1.08	1.02	1.02	1.03	1.03	1.03	1.07	1.06	1.02	1.03	1.02	1.02	1.02	Load power factor correction and voltage support if needed
ORSI JCT 70	Base Case	P0	Normal	1.08	1.02	1.02	1.03	1.03	1.03	1.07	1.06	1.02	1.03	1.02	1.02	1.02	Load power factor correction and voltage support if needed
PARLIER 115	Base Case	P0	Normal	1.06	1.02	1.02	1.04	1.04	1.04	1.06	1.05	1.02	1.04	1.02	1.02	1.02	Load power factor correction and voltage support if needed
PIEDRA 1 115	Base Case	P0	Normal	1.06	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
PIEDRA 2 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
PLMS-SRA 60	Base Case	P0	Normal	1.03	1.02	0.96	1.02	1.02	0.95	1.05	1.03	1.02	1.02	1.02	1.02	0.96	Load power factor correction and voltage support if needed
PLO ALTO 115	Base Case	P0	Normal	1.03	1.03	1.04	1.03	1.03	1.03	1.07	1.04	1.03	1.03	1.04	1.03	1.04	Load power factor correction and voltage support if needed
PNDLJ1 115	Base Case	P0	Normal	1.02	1.02	1.02	1.04	1.04	1.04	1.05	1.04	1.02	1.02	1.02	1.02	1.02	Load power factor correction and voltage support if needed

2017-2018 ISO Reliability Assessment - Study Results

Study Area: PG&E Central Coast  
PG&E Los Padres



High/Low Voltages

				Loading % (Baseline Scenarios)								Loading % (Sensitivity Scenarios)					Project & Potential Mitigation Solutions
Substation	Cont Name	Caegory	Category Description	2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Winter Peak	2022 Winter Peak	2027 Winter Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022 SP High CEC Forecast	2019 SP Peak-Shift	2027 SP Peak-Shift	2022 SP Heavy Renewable & Min Gas Gen	2027 Retirement of QF Generations	
PNDLJ2 115	Base Case	P0	Normal	1.02	1.02	1.02	1.04	1.04	1.04	1.05	1.04	1.02	1.03	1.02	1.02	1.02	Load power factor correction and voltage support if needed
PNEDLE 115	Base Case	P0	Normal	1.02	1.02	1.02	1.04	1.04	1.04	1.05	1.04	1.01	1.02	1.02	1.02	1.02	Load power factor correction and voltage support if needed
PNEDLE2 115	Base Case	P0	Normal	1.02	1.02	1.02	1.04	1.04	1.04	1.05	1.04	1.02	1.02	1.02	1.02	1.02	Load power factor correction and voltage support if needed
POMWDFL 115	Base Case	P0	Normal	1.06	1.02	1.02	1.04	1.04	1.03	1.07	1.05	1.02	1.04	1.02	1.02	1.02	Load power factor correction and voltage support if needed
POMWDFLJT 115	Base Case	P0	Normal	1.06	1.03	1.03	1.04	1.04	1.04	1.07	1.05	1.02	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
PPG 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.05	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
PSIERRA 60	Base Case	P0	Normal	1.03	1.02	0.96	1.02	1.02	0.95	1.05	1.03	1.02	1.02	1.02	1.02	0.96	Load power factor correction and voltage support if needed
PSQUINCY 69	Base Case	P0	Normal	1.08	1.07	1.02	1.07	1.06	1.00	1.10	1.07	1.07	1.06	1.07	1.07	1.02	Load power factor correction and voltage support if needed
PT MRTTI 60	Base Case	P0	Normal	1.00	1.01	1.01	1.01	1.00	0.99	1.08	1.02	1.00	1.01	1.00	1.01	1.01	Load power factor correction and voltage support if needed
Q529 115	Base Case	P0	Normal	1.04	1.03	1.03	1.03	1.03	1.04	1.06	1.05	1.03	1.02	1.03	1.04	1.03	Load power factor correction and voltage support if needed
Q529TP 115	Base Case	P0	Normal	1.04	1.03	1.03	1.03	1.03	1.04	1.06	1.05	1.03	1.02	1.03	1.04	1.03	Load power factor correction and voltage support if needed
Q558 115	Base Case	P0	Normal	1.04	1.03	1.03	1.03	1.03	1.04	1.06	1.05	1.03	1.02	1.03	1.04	1.03	Load power factor correction and voltage support if needed
Q632B 70	Base Case	P0	Normal	1.05	1.04	1.04	1.04	1.04	1.04	1.05	1.04	1.04	1.04	1.04	1.05	1.03	Load power factor correction and voltage support if needed
Q679 70	Base Case	P0	Normal	1.07	1.03	1.03	1.03	1.02	1.02	1.05	1.04	1.02	1.03	1.02	1.06	1.02	Load power factor correction and voltage support if needed
QUEBEC 115	Base Case	P0	Normal	1.05	1.03	1.03	1.03	1.02	1.02	1.06	1.05	1.03	1.05	1.03	1.03	1.03	Load power factor correction and voltage support if needed
QUEBECTP 115	Base Case	P0	Normal	1.05	1.03	1.03	1.03	1.02	1.03	1.05	1.05	1.03	1.05	1.03	1.03	1.03	Load power factor correction and voltage support if needed
RAINBW 115	Base Case	P0	Normal	1.06	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.03	1.03	1.03	1.03	1.03	Load power factor correction and voltage support if needed
RAINBWTP 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
RANCHRS 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.05	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
REEDLEY 115	Base Case	P0	Normal	1.06	1.02	1.02	1.04	1.04	1.03	1.06	1.05	1.02	1.03	1.02	1.02	1.02	Load power factor correction and voltage support if needed
REEDLEY 70	Base Case	P0	Normal	1.08	1.03	1.03	1.04	1.04	1.04	1.07	1.06	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
																	Turn on SALNR GN (36201) and it resolves the voltage issues. Proposal to install shunt capacitors at OIL Fields that would mitigate these low voltage issues. SARGCN (36200) Generating unit was retired jan-01,2017.
SALN RVR 60	P1-2:A19:53:_ COBURN-OIL FIELDS #1 60kv [6410]	P1	N-1	1.05	1.03	1.03	1.04	1.04	1.03	1.04	1.03	1.03	1.03	1.03	1.03	0.96	
SAN JOQN 70	Base Case	P0	Normal	1.06	1.04	1.04	1.04	1.04	1.04	1.05	1.04	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
SANDCRK 70	Base Case	P0	Normal	1.06	1.01	1.01	1.02	1.02	1.02	1.06	1.05	1.01	1.02	1.01	1.01	1.01	Load power factor correction and voltage support if needed
SANGER 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
																	Turn on SALNR GN (36201) and it resolves the voltage issues. Proposal to install shunt capacitors at OIL Fields that would mitigate these low voltage issues. SARGCN (36200) Generating unit was retired jan-01,2017.
SARG CYN 60	P1-2:A19:53:_ COBURN-OIL FIELDS #1 60kv [6410]	P1	N-1	1.05	1.04	1.04	1.04	1.04	1.04	1.04	0.89	1.04	1.04	1.04	1.04	0.96	
SCWAX 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.05	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
SCWAXJCT 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.05	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
SEF TAP 60	Base Case	P0	Normal	1.06	0.99	0.99	1.00	1.00	1.00	1.05	1.02	0.99	1.00	0.99	1.01	0.98	Load power factor correction and voltage support if needed
SESWTF 115	Base Case	P0	Normal	1.04	1.03	1.03	1.04	1.04	1.04	1.06	1.04	1.02	1.03	1.03	1.03	1.02	Load power factor correction and voltage support if needed
SESWTFTP 115	Base Case	P0	Normal	1.04	1.03	1.03	1.04	1.04	1.04	1.06	1.04	1.02	1.03	1.03	1.03	1.02	Load power factor correction and voltage support if needed
SHEPHERD 115	Base Case	P0	Normal	1.04	1.03	1.03	1.04	1.04	1.04	1.06	1.04	1.03	1.04	1.04	1.03	1.03	Load power factor correction and voltage support if needed
SIERVL69 69	Base Case	P0	Normal	1.06	1.05	1.02	1.04	1.04	0.99	1.09	1.05	1.05	1.03	1.05	1.04	1.02	Load power factor correction and voltage support if needed
SIERVLTP 69	Base Case	P0	Normal	1.06	1.05	1.02	1.04	1.04	1.00	1.09	1.05	1.05	1.03	1.05	1.04	1.02	Load power factor correction and voltage support if needed
SLDAD 4M 115	Base Case	P0	Normal	1.05	0.99	0.99	1.00	1.00	1.00	1.04	1.02	0.99	1.00	0.99	1.01	0.99	Load power factor correction and voltage support if needed
SLDAD 5M 115	Base Case	P0	Normal	1.05	0.99	0.99	1.00	1.00	1.00	1.04	1.02	0.99	1.00	0.99	1.01	0.99	Load power factor correction and voltage support if needed
SNGRCOGN 115	Base Case	P0	Normal	1.06	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
SNGRJCT 115	Base Case	P0	Normal	1.06	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
SNJQJCT 70	Base Case	P0	Normal	1.06	1.04	1.04	1.04	1.04	1.04	1.05	1.04	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
SNJQTP 70	Base Case	P0	Normal	1.06	1.04	1.04	1.04	1.04	1.04	1.05	1.04	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
SOLEDAD 60	Base Case	P0	Normal	1.06	0.99	0.99	1.00	1.00	1.00	1.05	1.02	0.99	1.00	0.99	1.01	0.98	Load power factor correction and voltage support if needed
STCRRL J 70	Base Case	P0	Normal	1.08	1.02	1.02	1.03	1.03	1.03	1.07	1.06	1.02	1.03	1.02	1.02	1.02	Load power factor correction and voltage support if needed
STONCRRL 70	Base Case	P0	Normal	1.07	1.01	1.01	1.03	1.03	1.02	1.06	1.05	1.01	1.02	1.01	1.01	1.01	Load power factor correction and voltage support if needed
STRD JCT 70	Base Case	P0	Normal	1.05	1.04	1.04	1.04	1.04	1.04	1.05	1.04	1.04	1.04	1.04	1.05	1.03	Load power factor correction and voltage support if needed
STROUD 70	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.04	1.05	1.04	1.03	1.03	1.03	1.05	1.03	Load power factor correction and voltage support if needed
SUNMAID 115	Base Case	P0	Normal	1.05	1.04	1.04	1.05	1.05	1.05	1.06	1.05	1.04	1.04	1.04	1.04	1.04	Load power factor correction and voltage support if needed
TVY VLLY 70	Base Case	P0	Normal	1.07	1.03	1.03	1.04	1.04	1.03	1.06	1.06	1.02	1.03	1.02	1.03	1.03	Load power factor correction and voltage support if needed
ULTPWRJ 115	Base Case	P0	Normal	1.05	1.04	1.03	1.04	1.04	1.05	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
VAFB SSB 70	Base Case	P0	Normal	1.01	1.04	1.04	1.03	1.02	1.02	1.02	1.03	1.03	1.02	1.03	1.03	1.03	Load power factor correction and voltage support if needed

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High/Low Voltages

Substation	Cont Name	Caegory	Category Description	Loading % (Baseline Scenarios)								Loading % (Sensitivity Scenarios)					Project & Potential Mitigation Solutions
				2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Winter Peak	2022 Winter Peak	2027 Winter Peak	2019 Spring Light Load	2022 Spring Off-Peak	2022 SP High CEC Forecast	2019 SP Peak-Shift	2027 SP Peak-Shift	2022 SP Heavy Renewable & Min Gas Gen	2027 Retirement of QF Generations	
WAHTOKE 115	Base Case	P0	Normal	1.06	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.03	1.04	1.03	1.03	1.03	Load power factor correction and voltage support if needed
WAUKENA_SS 115	Base Case	P0	Normal	1.04	1.03	1.03	1.03	1.03	1.04	1.06	1.05	1.02	1.02	1.03	1.04	1.03	Load power factor correction and voltage support if needed
WHITERIVER_P115	Base Case	P0	Normal	1.05	1.03	1.04	1.03	1.03	1.03	1.05	1.05	1.03	1.05	1.03	1.03	1.03	Load power factor correction and voltage support if needed
WISHON 70	Base Case	P0	Normal	1.04	1.03	1.03	1.04	1.04	1.04	1.05	1.04	1.04	1.04	1.03	1.04	1.03	Load power factor correction and voltage support if needed
WOODWARD 115	Base Case	P0	Normal	1.04	1.03	1.03	1.04	1.04	1.04	1.06	1.04	1.03	1.03	1.03	1.03	1.03	Load power factor correction and voltage support if needed
WST FRSO 115	Base Case	P0	Normal	1.07	1.02	1.02	1.04	1.04	1.04	1.07	1.05	1.02	1.03	1.02	1.02	1.02	Load power factor correction and voltage support if needed
WTSNVLLE 60	Base Case	P0	Normal	1.06	1.04	1.04	1.03	1.04	1.03	1.06	1.05	1.04	1.03	1.04	1.05	1.04	Load power factor correction and voltage support if needed
WWARD JT 115	Base Case	P0	Normal	1.05	1.03	1.03	1.04	1.04	1.04	1.06	1.05	1.03	1.04	1.04	1.03	1.03	Load power factor correction and voltage support if needed

## 2017-2018 ISO Reliability Assessment - Study Results

**Study Area:** PG&E Central Coast  
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## Voltage Deviations

[illegible]



2017-2018 ISO Reliability Assessment - Study Results

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Transient Stability

Contingency	Category	Category Description	Transient Stability Performance (Number of voltage and frequency violations)										Potential Mitigation Solutions
			2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Spring Light Load	2022 Spring Off-Peak	Select..	Select..	Select..	Select..	Select..	
Mosslanding Sw Station 3Ø fault with normal clearing.	P1-2		0	0	0	0	0						No violation
Mosslanding Sw Station 230/115 kV Bank #4 3Ø fault with normal clearing.	P1-3		0	0	0	0	0						No violation
Mosslanding Sw Sta 230 kV line breaker SLG fault with normal clearing.	P2-3		80	80	80	80	0						Under review with PTO .
MossIndswsta 230/115 kVBank # 4 3Ø fault with normal clearing with Diablo Unit #2 offline in the base case.	P3-3		0	0	0	0	0						No violation
MossIndswsta-Lasaguilas 230 kV line 3Ø fault with normal clearing with Diablo Unit #2 offline in the base case.	P3-2		0	0	0	0	0						No violation
Mosslanding Switching Station SLG fault wih stuck breaker	P4-1		0	0	0	80	0						Under review with PTO .
Mosslanding Switching Station SLG fault wih stuck breaker expanded o MossInsw-Duke Moss and MossIndsw-Mecalf	P4-2		80	80	80	80	0						Under review with PTO .
Mosslanding Switching Station SLG fault wih stuck breaker	P4-3		0	0	0	0	16						Under review with PTO .
Duke Moss #6 unit with delayed clearing	P5-1		0	0	0	0	0						No violation
Mosslanding Switching Station -Duke Moss 230 KV line SLG Fault with delayed clearing	P5-2		0	0	0	80	0						Under review with PTO .
Mosslanding Switching Station 230/115 KV Transformer Bank # 4 SLG fault with delayed clearing.	P5-3		88	91	84	93	0						Under review with PTO .
Mesa 115 KV SVD SLG fault with delayed clearing.	P5-4		0	0	0	0	0						No violation
Mosslanding Switching Station /115 KV Bus SLG fault with delayed clearing.	P5-5		0	0	0	0	0						No violation

2017-2018 ISO Reliability Assessment - Study Results

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Transient Stability

Contingency	Category	Category Description	Transient Stability Performance (Number of voltage and frequency violations)										Potential Mitigation Solutions
			2019 Summer Peak	2022 Summer Peak	2027 Summer Peak	2019 Spring Light Load	2022 Spring Off-Peak	Select..	Select..	Select..	Select..	Select..	
MossIndswsta-Coburn 230 kV line 3Ø fault with normal clearing with Metcalf 500/230 kV #13 Transformer offline in the base case.	P6-1		0	0	0	0	0						No violation
MossIndswsta 230 kV bus 3Ø fault with normal clearing with MossIndswsta 500/230 kV #9 Transformer offline in the base case.	P6-2		0	0	0	0	0						No violation
Moss Landing- Green Valley # 1 & 2 SLG fault with normal clearing.	P7-1		0	0	0	0	0						No violation

2017-2018 ISO Reliability Assessment - Study Results

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Single Contingency Load Drop

Worst Contingency	Category	Category Description	Amount of Load Drop (MW)										Potential Mitigation Solutions
			Select..	Select..	Select..	Select..	Select..	Select..	Select..	Select..	Select..	Select..	

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



Single Source Substation with more than 100 MW Load

Substation	Load Served (MW)										Potential Mitigation Solutions
	Select..	Select..	Select..	Select..	Select..	Select..	Select..	Select..	Select..	Select..	

No single Source Substation with more than 100 MW Load.