

ID	Network Upgrades	Description	PTO	Study	Type of Upgrade	Category	Status	Trigger Year	Current Expected Construction Start	Expected CPUC Permit Application	Expected In-Service Jan 2023 TDF	Expected In-Service Apr 2022 TDF	Expected In-Service Jul 2022 TDF	Expected In-Service Oct 2022 TDF	Expected In-Service Jan 2023 TDF	Expected In-Service Apr 2023 TDF	Expected In-Service Jul 2023 TDF (Current)	Aggregate MW in Queue with Executed LGIA	Notes	
21rsm-4	Monta Vista 115 kV circuit breaker 1322 overstress	Replace Monta Vista 115 kV circuit breaker 1322	PG&E	RA-21	Reliability	SCD overstress	In-Service	2021	Oct-21		Oct-21	Oct-21	Oct-21	Oct-21	Oct-21	Oct-21	Oct-21	1200	In-Service	
20rsm-7a	Tesla 500 kV circuit breaker 632 overstress	Replace Tesla 500 kV circuit breaker 632 with 63 kA interrupting capability	PG&E	RA-20	Reliability	SCD overstress	In-Service	2021	Dec-21		Dec-21	Dec-21	Dec-21	Dec-21	Dec-21	Dec-21	Dec-21	850	In-Service	
C1P2P-GR01	Tesla 500 kV circuit breakers 622 overstress	Replace Tesla 500 kV circuit breaker 622 with 63 kA interrupting capability. Only went to 50 kA	PG&E	C13	Reliability	SCD overstress	In-Service	2021								Dec-21	Dec-21	400	In-Service	
C12P2-GRJL3	Midway Substation 500 kV CB 712 overstress	Replace Midway Substation 500 kV CB 712 with 63 kA interrupting capability	PG&E	C12	Reliability	SCD overstress	In-Service	2021	Dec-22		Dec-25	Feb-22	Feb-22	Feb-22	Feb-22	Feb-22	Feb-22	1800	In-Service	
CBP2-N09	Re-conductor Stockton A-Weber #3 60 kV Line (Stockton A-Hazleton Jct)	Re-conductor 0.9 mi of Stockton A-Weber #3 60 kV Line from Stockton A to Hazleton Jct Pole 000/026 with 715 AAC.	PG&E	C9	Deliverability	Re-conductor	In-Service	2018	Aug-22		Mar-22	Feb-22	Feb-22	Feb-22	Feb-22	Feb-22	Feb-22	25	In-Service	
C12P1-NP02	Lodi Substation 60 kV circuit breakers 12 and 22 overstress		PG&E	C12	Reliability	SCD overstress	In-Service	2011	Aug-20		Mar-22	Dec-22	May-22	May-22	May-22	May-22	May-22	0	In-Service	
20rsm-3	Midway 230 kV Bus Section E overload mitigation	Replace limiting conductor and/or fittings on Bus Section E to achieve 3372 A min. rating.	PG&E	RA-20	Reliability	Bus Flow	In-Service	2021			Sep-22	Jul-22	Jul-22	Jul-22	Jul-22	Jul-22	Jul-22	409.7	In-Service	
C11P2-FP01	Midway 500 kV circuit breakers 732, 802, 832 and 842 overstress	Replace Midway 500 kV circuit breakers 732, 802, 832 and 842 and associated switches/relays	PG&E	C11	Reliability	SCD overstress	In-Service	2021	Dec-22		Sep-22	Dec-25	Aug-22	Aug-22	Aug-22	Aug-22	Aug-22	2100.1	In-Service	
22rsm-3	Metcalf 230 kV Substation Circuit Breaker #No 292 Upgrade	Upgrade Metcalf Circuit Breaker #292 due to overstress issues	PG&E		Capacity		In-Service	2022				Jan-25	Dec-25	Sep-22	Sep-22	Sep-22	Sep-22	1395	In-Service	
C11P2-FC01	Midway 500kV CB's 722 Overstress	Midway Sub: Replace 500kV CB's 722, SW's and Relays	PG&E	C11	Reliability	SCD overstress	In-Service	2021	Sep-22		Dec-25	Dec-25	Sep-22	Sep-22	Sep-22	Sep-22	Sep-22	2100.1	In-Service	
C12P2-KC01	Midway Substation 500kV CB 722 Overload mitigation	Replace Midway 500 kV CB 722 to achieve 3600 A emergency rating	PG&E	C12	Reliability	Bus Flow	In-Service	2021	Dec-22		Dec-25	Dec-25	Sep-22	Sep-22	Sep-22	Sep-22	Sep-22	3231.05	In-Service	
C13P1-GPND4	Metcalf Substation 230 kV capacitor circuit breakers Interim Solution	Metcalf Substation 230 kV capacitor circuit breakers Interim Solution	PG&E	C13	Reliability	SCD overstress	In-Service	2018	Oct-22		May-25	Sep-22	Dec-22	Dec-22	Nov-22	Nov-22	Nov-22	2195	In-Service	
CBP2-6	Re-conductor Los Banos-Q779 SS #1 230 kV Line	Re-conductor 4.5 mi Los Banos-Padre Flat SS #1 230 kV Line with 1113 ACSS and upgrade equipment to 1900 A.	PG&E	C8	Deliverability	Re-conductor	In-Service	2017	Oct-22		Mar-23	Feb-23	Feb-23	Dec-22	Dec-22	Dec-22	Dec-22	632	In-Service	
CBP2-F13-F15	Gates 230kV Bus Section E and CB 312, 322, 2102, 2202 overload mitigation (BAAH)	overload -- convert bus section E to BAAH and move Panache-Gates #1 and #2 230 kV lines and	PG&E	C9	Reliability	Bus Flow	In-Service	2019	Aug-21		Mar-23	Mar-23	May-23	Mar-23	May-23	May-23	Apr-23	1993.95	In-Service	
CBP1-35	Re-conductor Los Banos-Quinto SS 230 kV Line	Re-conductor 6.11 mi Quinto Sw Sta-Los Banos 230 kV Line with upper Bases 795 ACSS	PG&E	C8	Deliverability	Re-conductor	In-Service	2017	Mar-22		May-22	May-23	May-23	May-23	Apr-23	May-23	May-23	1110.62	In-Service	
C12P2-PNU-02	Gates 230 kV circuit breakers 352, 362 and 372 overstress mitigation (Cap Banks)	Replace Gates 230 kV circuit breakers 352, 362 and 372 with 63 kA interrupting capability	PG&E	C12	Reliability	SCD overstress	In-Service	2022	Oct-22		Apr-23	Mar-23	Mar-23	Apr-23	Apr-23	May-23	Jul-23	2592.67	In-Service	
CBP2-3	OCBRAS-08 RAS (Deliverability Triggered RNU)	OCBRAS-08 RAS to trip Generation offline for outage AND overload of either Gates 500/230 kV Transformer Bank 11 or 12	PG&E	C8	Deliverability	RAS (Deliverability)	In-Flight	2017			Jan-23	Jan-23	Dec-23	Mar-24	May-24	May-24	May-24	2870.57	In-Service	
CBP1-34	Re-conductor Padre Flat SS-Panache #1 230 kV Line with 795 ACSS	Re-conductor 32.59 mi Q779/Padre Flat SS-Panache #1 230 kV Line with 795 ACSS	PG&E	C8	Deliverability	Re-conductor	In-Flight	2017	Sep-23	Feb-23	May-24	May-24	May-24	May-24	May-24	May-24	May-24	600	In-Service	
C12P2-GRJL2	Gates Substation 230 kV Bus Overstress	Install series bus reactors between Gates Substation 230 kV bus sections E and F	PG&E	C12	Reliability	SCD overstress	In-Flight	2022	Nov-23		Dec-25	Dec-25	Dec-25	Mar-25	Mar-25	Mar-25	May-24	2300	In-Service	
C11P1-NPT03	Rio Oso Substation 115 kV circuit breakers 412, 422, 432 and 542 overstress	Replace Rio Oso Substation 115 kV circuit breakers 412, 422, 432 and 542 and associated switches/relays	PG&E	C12	Reliability	SCD overstress	In-Flight	2020	Jun-21		Dec-24	Dec-24	Nov-23	May-24	Dec-24	Sep-24	Sep-24	49.9	In-Service	
21rsm-3	Kern PP Substation 115 kV Cbs 182, 262 and 282 overstress (BAAH Conversion Phase 1)	Kern PP Sub: Existing PG&E 115 kV BAAH conversion project will cover this replacement.	PG&E	RA-21	Reliability	SCD overstress	In-Flight	2021	Jul-21		Feb-26	Feb-23	Apr-23	Nov-24	Nov-24	Nov-24	Nov-24	200	In-Service	
20rsm-6	Wheeler Ridge #2 230 kV Line for loss of Midway-Bitterwater 230 kV line and overload on the Midway.	#2 230 kV Line for loss of Midway-Bitterwater 230 kV line and overload on the Midway-Wheeler Ridge #1 230 kV line.	PG&E	RA-20	Reliability	RAS (Reliability)	In-Flight	2020	May-24		Dec-23	Dec-23	Dec-23	Oct-23	Dec-23	Nov-24	Nov-24	100	In-Service	
20rsm-7b	Tesla 500 kV circuit breakers 542 and 642 overstress	Replace Tesla 500 kV circuit breakers 542 and 642 with 63 kA interrupting capability	PG&E	RA-20	Reliability	SCD overstress	In-Flight	2020	May-24		Jul-24	Jan-24	Apr-24	Jul-24	Jul-24	Sep-24	Nov-24	2680	In-Service	
C12P1-NPT01	Gold Hill Substation 115 kV circuit breakers 142 and 172 overstress	Replace Gold Hill Substation 115 kV circuit breakers 142 and 172 and associated switches/relays	PG&E	C12	Reliability	SCD overstress	In-Flight	2021	Feb-24		Sep-23	Sep-23	Jan-24	Nov-23	Jul-25	Aug-25	Jan-25	Jan-25	49.9	In-Service
C11P2-ND03	North Dublin-Cayetano 230 kV Line	Reconductor North Dublin-Cayetano 230 kV Line 2.63 miles OH Line & 2.82 UG cable with new UG cable 797 MVA/2000 A.	PG&E	C11	Deliverability	Re-conductor	In-Flight	2021	Dec-24	Sep-23	Dec-25	Dec-25	Dec-25	Mar-25	Mar-25	Feb-25	Mar-25	90.8	In-Service	
CBP1-F11	Re-conductor Dos Amigos PP-Panache #3 230 kV Line	Re-conductor 23.63 mi Dos Amigos PP-Panache #3 230 kV Line with 795 ACSS	PG&E	C9	Deliverability	Re-conductor	In-Flight	2017	Sep-24		May-25	Apr-25	Apr-25	Apr-25	Apr-25	Apr-25	Apr-25	632	In-Service	
C13P1-KPND02	Convert Midway Substation 230 kV to BAAH	Convert Midway Substation 230 kV to BAAH in order to install bus reactors & RAS	PG&E	C13	Reliability	SCD overstress	In-Flight	2016							Apr-25	Apr-25	Apr-25	May-25	0	In-Service
C11P2-NP01	Contra Costa 230kV SW's 601, 603 overload	Contra Costa PP: Replace 230kV SW's 601 & 603 and jumpers.	PG&E	C11	Reliability	Bus Flow	In-Flight	2021	Dec-24		Dec-25	Dec-25	Jul-25	May-25	May-25	May-25	May-25	0	In-Service	
C11P2-NP02	Contra Costa 230kV Bus Sections D, E and F and circuit breaker 820 overload	Contra Costa PP: Re-conductor Bus Sections D, E and F. Replace circuit breaker 820.	PG&E	C11	Reliability	Bus Flow	In-Flight	2021	Dec-24		Dec-25	Dec-25	Jul-25	May-25	May-25	May-25	May-25	490.8	In-Service	
C11P2-NR01	Cottonwood Substation 230 kV circuit breakers 232, 242 overstress	Replace Cottonwood Substation 230 kV circuit breakers 232, 242 and associated switches/relays	PG&E	C11	Reliability	SCD overstress	In-Flight	2022	Nov-24		Feb-24	Apr-24	May-24	Aug-25	Aug-25	Mar-25	May-25	500	In-Service	
20rsm-5	Tesla 500 kV circuit breaker 612 overstress	Replace Tesla Substation 500 kV CB 612 and associated switches/relays	PG&E	RA-20	Reliability	SCD overstress	In-Flight	2020	Oct-24		Mar-24	May-24	Jul-24	Aug-24	Aug-24	Oct-24	Jun-25	850	In-Service	
C13P1-GPND4	Metcalf Substation 230 kV capacitor circuit breakers 654, 664, 674 and 684 overstress	Replace Metcalf Substation 230 kV capacitor circuit breakers 654, 664, 674 and 684	PG&E	C13	Reliability	SCD overstress	In-Flight	2018	Mar-25		May-25	May-25	May-25	Feb-26	May-25	Feb-26	Sep-25	2195	In-Service	
C12P1-NPT04	Vaca Dixon Substation 230 kV circuit breakers 442, 452 and 462 overstress	Replace Vaca Dixon Substation 230 kV circuit breakers 442, 452 and 462 and associated switches/relays	PG&E	C12	Reliability	SCD overstress	In-Flight	2021	May-24		Mar-24	Jun-24	Dec-24	Mar-25	May-25	Aug-25	Oct-25	1840.8	In-Service	
21rsm-3	Kern PP Substation 115 kV Cbs 182, 262 and 282 overstress (BAAH Conversion Phase 2 - incl CB282)	Kern PP Sub: Existing PG&E 115 kV BAAH conversion project will cover this replacement.	PG&E	RA-21	Reliability	SCD overstress	In-Flight	2021	May-25	Feb-26	Dec-23	Dec-23	Dec-23	Dec-25	Dec-25	Dec-25	Dec-25	200	In-Service	
21rsm-SCD-23	El Cerrito G 115kV CB 112, 142, 132 Overstress	Replace Overstressed Circuit Breakers	PG&E	RA-21	Reliability	SCD overstress	In-Flight	2011	Feb-24		Jul-24	Jul-24	Jul-24	Nov-25	Dec-25	Dec-25	Dec-25	0	In-Service	
77	Tesla MPAC	New 230kV MPAC building relocates 230kV equipment from existing Control Building	PG&E	n/a	Reliability	MPAC	In-Flight	2018	Apr-25			n/a	n/a	Oct-24	Dec-25	Dec-25	Dec-25	0	In-Service	
CBP2-15	Cottonwood Substation 230 kV Circuit Breaker 522 and 542 Overstress	542 (rated @ 34.5kA, overstress close-in fault is 35,179A or 2%, 679A)	PG&E	C8	Reliability	SCD overstress	In-Flight	2018	Aug-23		Jul-23	Aug-23	Aug-23	Sep-24	Sep-24	Sep-24	Dec-25	700	In-Service	
CBP1-F12	Re-conductor Borden-Gregg #2 230 kV Line	Re-conductor 6.25 mi Borden-Gregg #2 230 kV Line with 1113 ACSS	PG&E	C9	Deliverability	Re-conductor	In-Flight	2017	Aug-25	Oct-23	May-25	May-25	May-25	May-25	May-25	Jan-26	Jan-26	632	In-Service	
C12P1-GP101	Ames Distribution 115 kV circuit breaker 132 overstress	Replace Ames Distribution 115 kV circuit breaker 132	PG&E	C12	Reliability	SCD overstress	In-Flight	2019	Dec-25		Mar-24	Jun-24	Aug-24	Mar-26	Mar-26	Mar-26	Mar-26	450	In-Service	
CBP2-1	Re-conductor Borden-Gregg #1 230 kV Line	ACS and upgrade equipment to 2000 A minimum (this is the existing Borden-Gregg 230 kV Line)	PG&E	C8	Deliverability	Re-conductor	In-Flight	2017	Jan-26	Oct-23	Jan-26	Jan-26	Jan-26	Jan-26	Jan-26	May-26	May-26	632	In-Service	
C11P2-ND01	Re-conductor Fulton-Hopland 60 kV Line (Fitch Mountain Tap-Geyers Jct)	Re-conductor Fulton-Hopland 60 kV Line (Fitch Mountain Tap 009/000A-Geyers Jct 016/004) ~7 mi total length with 715 AAC	PG&E	C11	Deliverability	Re-conductor	In-Flight	2018	Nov-25	Jul-24	Mar-26	Dec-27	Dec-27	Nov-25	Feb-26	May-26	Jun-26	230	In-Service	
CBP2-N02	Re-conductor Fulton-Hopland 60 kV Line (Geyers Jct-Cloverdale Jct-Hopland)	016/003A-Cloverdale Jct 026/002-Hopland) with 715 AAC and upgrade any limiting equipment	PG&E	C9	Deliverability	Re-conductor	In-Flight	2019	Nov-25	Jul-24	May-27	Mar-27	Dec-27	Nov-25	Feb-26	May-26	Jun-26	230	In-Service	
20rsm-4	Metcalf 115kV breakers Overstress (almost all breakers)	Install 4.3 ohm reactors at low side of Metcalf 115 kV 230kV Transformers	PG&E	RA-20	Reliability	SCD overstress	In-Flight	2020	Oct-25		Feb-25	Aug-25	Sep-25	Nov-25	Jan-26	Feb-26	Jul-26	1145	In-Service	
21rsm-1	Henrietta Substation 70kV Cbs 17 and 72 Overstress	Henrietta Sub: Replace 70kV CB 12 & 72 and switches.	PG&E	RA-21	Reliability	SCD overstress	In-Flight	2021	Jul-25		Dec-25	Jun-26	Feb-25	Sep-26	Oct-26	Oct-26	Oct-26	0	In-Service	
21rsm-3	Kern PP Substation 115 kV Cbs 182, 262 and 282 overstress (BAAH Conversion Phase 3 - incl CB262)	Kern PP Sub: Existing PG&E 115 kV BAAH conversion project will cover this replacement.	PG&E	RA-21	Reliability	SCD overstress	In-Flight	2021	Jan-26	Feb-26	Oct-24	Oct-24	Oct-24	Dec-26	Dec-26	Dec-26	Dec-26	200	In-Service	
C12P2-LDN01	Ripon-Manteca 115 kV Line Re-conductor	Reconductor Ripon-Manteca 115 kV line 1.51 mi section of 2/0 CU and 0.92 mi 4/0 ACSS (2.43 mi total)	PG&E	C12	Deliverability	Re-conductor	In-Flight	2021	Mar-26	Jan-25	Dec-27	Dec-27	Dec-27	Dec-27	Dec-27	Sep-28	Apr-27	99	In-Service	
21rsm-5	Palo Alto 115 kV circuit breakers 412 and 442 overstress	Replace Palo Alto 115 kV circuit breakers 412 and 442 with 63 kA interrupting capability	PG&E	RA-21	Reliability	SCD overstress	In-Flight	2021	Oct-26		Sep-24	Mar-25	Jun-26	Nov-27	Nov-27	Nov-27	Nov-27	250	In-Service	

21rsmt-3	Kern PP Substation 115 kV CBs 182, 262 and 282 overstress (BAAH Conversion Phase 4 - incl CB182)	Kern PP Sub: Existing PG&E 115 kV BAAH conversion project will cover this replacement.	PG&E	RA-21	Reliability	SCD overstress	In-Flight	2021	Feb-27		Feb-26	Dec-25	Dec-25	Dec-27	Dec-27	Dec-27	Dec-27	200	Q3-2023: 2023 Reprioritization.
C12P2-LDMU2	Stanislaus-Melones Sw Sta-Manteca #1 115 kV Line Re-conductor	Reconductor Stanislaus-Melones Sw Sta-Manteca #1 115 kV line 25-23 miles section of various conductors from 018/115-043/227	PG&E	C12	Deliverability	Re-conductor	In-Flight	2021	Jan-26	Jun-24	Dec-27	Dec-27	Dec-27	Dec-27	Dec-27	Sep-28	Feb-28	99	scoping of the work. Dates are subject to change until permitting, land acquisitions, and clearances are approved.
C12P2-LDMU3	Bellota-Riverbank-Melones Sw Sta 115 kV Line 115 kV Line Re-conductor	Reconductor a total of 17 miles of Bellota-Riverbank-Melones SW STA 115 kV Line with 477 ACSS	PG&E	C12	Deliverability	Re-conductor	In-Flight	2021	Jan-28	Jun-24	Dec-27	Dec-27	Dec-27	Dec-27	Dec-27	Sep-28	Apr-28	99	scoping of the work. Dates are subject to change until permitting, land acquisitions, and clearances are approved.
C12P2-LDMU4	Stanislaus-Melones SW STA-Riverbank Jct Sw Sta 115 kV Line Re-conductor	115 kV Line 7.53 miles section of various conductors from 000/001-007/043 - scope taken over by the more	PG&E	C12	Deliverability	Re-conductor	In-Flight	2021	Dec-27		Dec-27	Dec-27	Dec-27	Dec-27	Dec-27	Sep-28	May-28	99	scoping of the work. Dates are subject to change until permitting, land acquisitions, and clearances are approved.
	Morro Bay MPAC	New 230kV MPAC building relocates 230kV equipment from existing Control Building	PG&E	n/a	Reliability	MPAC	In-Flight	2014	Nov-26			n/a	n/a	Mar-27	May-27	May-27	May-28	0	Q3-2023: 2023 Reprioritization. There are no current dependent Generation projects triggering this work.
C12P1-GCR01	Moraga 115 kV circuit breakers 582, 612, 622, 642 and 712 overstress	Replace Moraga 115 kV circuit breakers 582, 612, 622, 642 and 712	PG&E	C12	Reliability	SCD overstress	In-Flight	2022	Aug-28		Oct-26	Jan-27	Nov-28	Oct-29	Nov-28	Nov-28	Nov-28	220	project has signed requiring this project however that project has gone into suspension.
CBP2-10	QCBRAS-02 SPS (Deliverability Triggered RNU)	Q1106 200 MW wind and Hatchet Ridge 102 MW wind for thermal overloads on the Q1106 SS-Cottonwood, Carberry SS-	PG&E	CB	Deliverability	RAS (Deliverability)	Deferred	2017	May-28		Jul-23	Jul-23	Jul-23	TBD	Mar-27	Dec-28	Dec-28	200	Station construction. Triggering Interconnection Project has suspended for 1-year
22rsmt-4	New 230 kV switching station to loop Dos Amigos - Panoche # 3 230 kV	Dos Amigos - Panoche # 3 230 kV Line requiring access road, land and land rights acquisition and permitting, remote end	PG&E	RA-22	Deliverability	New Station	Initiating					n/a	n/a	Dec-28	Dec-28	Dec-28	Dec-28	632	funding and planning scoping and engineering activities starting in 2023.
19rsmt-3	Schindler 70kV Bus Normal & Outage Overload	Upgrade Schindler 70 kV Bus to 1113 kcmil AAC	PG&E	RA-19	Reliability	Bus Flow	Not Triggered											0	Not triggered
C13P1-GPN06	Birds Landing 230 kV CBs 422, 222, 412, 212 Overload Mitigation	equipment and replacing 6 circuit breakers and associated switches/relays	PG&E	C13			Removed											0	
C13P1-KPN02	Midway Substation 230 kV bus and 27 circuit breakers overstress	Substation 230 kV bus sections D and E (16 ohm parallel / 8 ohm net)	PG&E	C13	Reliability	SCD overstress	Not Triggered											0	Not triggered
C13P2-FPTD4	Jackson Switching Station (CHSR Site 10)		PG&E	C13			Removed											0	
C13P2-FPTD5	CHSR Site 8		PG&E	C13			Removed											0	
CBP2-F17	Panoche 115 kV circuit breakers 152 overstress	Replace Panoche 115 kV circuit breaker 152 and associated switches/relays	PG&E	C9	Reliability	SCD overstress	Removed											0	