



Together, Building  
a Better California

# Transmission Development Forum

Generation Interconnection Project (GIP) Upgrades  
and Transmission Planning Process (TPP)  
Upgrade Status

January 31, 2023



# Presentation Summary

- PG&E fully supports the Transmission Development Forum to share Generation Triggered Reliability and Deliverability project status to all stakeholders.
- PG&E workbooks capturing Generator Interconnection Projects (GIP) and Transmission Planning Process (TPP) project statuses. The Excel Workbook contains projects that have been triggered by Interconnection Agreements while it may not show upgrades not yet triggered by an interconnection agreement.
- This presentation provides updates and the opportunity for discussion on the status of GIP and TPP projects that are highest priority to immediate generation interconnection. This is a technical discussion on the projects.
- PG&E requests that stakeholders save questions until the completion of each slide. Projects have been grouped to enable efficient and productive discussion.



# PG&E Projects Status Summary

## TPP Projects with improvements

Project No.	Scope	Status	Planned * Const. Start	Previous TDF Report Dated	Planned ** In-Service	Comments
TPP	Wilson-Oro Loma 115kV Line Reconductoring Reconductor approximately 9 circuit miles between Wilson and El Nido on the Wilson-Oro Loma 115 kV Line with a larger conductor to achieve at least 650 Amps of summer emergency rating.	Initiating	12/1/2027	12/1/2028	5/1/2027	Q1-2024: Improved ISD due to prioritization.
TPP	Cottonwood 115 kV Bus Sectionalizing Breaker	In-Flight	8/11/2025	10/5/2026	6/19/2026	Q1-2024: Project ISD improved due to Schedule/construction sequencing date adjustments.
TPP	Estrella Substation Project	In-Flight	11/27/2024	11/1/2029	7/5/2029	Q1-2024: Project ISD improved due to Schedule/construction sequencing date adjustments.
TPP	Metcalfe-Piercy & Swift and Newark-Dixon Landing 115 kV Upgrade	Initiating	1/1/2026	12/1/2027	3/1/2027	Q1-2024: Project ISD improved due to Schedule/construction sequencing date adjustments.
TPP	Reconductor Delevan-Cortina 230kV line	Initiating	9/30/2027	12/1/2028	2/2/2028	Q1-2024: Project ISD improved due to Schedule/construction sequencing date adjustments.

\* Construction start is dependent on design strategy, CPUC permitting, obtaining necessary land / aerial rights, clearance sequence, obtaining necessary construction easements, and access to structures

\*\* In-Service Date is subject to change through the design process as more information becomes available.



# PG&E Projects Status Summary

## TPP Projects with delays (3+ months)

Project No.	Scope	Status	Planned * Const. Start	Previous TDF Report Dated	Planned ** In-Service	Comments
TPP	Gates 500 kV Dynamic Voltage Support	In-Flight	4/3/2023	9/30/2024	1/1/2025	Q1-2024: Project ISD delayed due to schedule/construction sequencing date adjustments.
TPP	Manteca #1 60 kV Line Section Reconductoring Project Reconductor ~1.13 miles of the Manteca #1 60 kV Line with larger conductor and remove any limiting component, as necessary.	In-Flight	3/28/2025	1/6/2025	6/20/2025	Q1-2024: Project ISD delayed due to schedule/construction sequencing date adjustments.
TPP	Rio Oso 230/115 kV Transformer Upgrades	In-Flight	7/5/2022	12/12/2025	4/6/2026	Q1-2024: Project ISD delayed due to schedule/construction sequencing date adjustments. Bank 1 released to operations 12/30/24. Bank 3 released to operations 5/1/25. Full capacity achieved 4/6/26 as BAAH upgrade and cutovers for each line are complete.

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# PG&E Projects Status Summary

## TPP Projects with delays (6+ months)

Project No.	Scope	Status	Planned * Const. Start	Previous TDF Report Dated	Planned ** In-Service	Comments
TPP	Cortina 230/115/60 kV Transformer Bank No. 1 Replacement Project	Initiating	10/1/2025	5/1/2027	6/1/2028	Q1-2024: Project ISD delayed due to prioritization.
TPP	Wheeler Ridge Junction Substation	In Flight	1/1/2029	5/4/2029	12/31/2033	Q1-2024: Project still on hold. Schedule is pending as project team. Project will be kicked off in February.
TPP	Martin 230 kV Bus Extension	In-Flight	2/27/2026	2/12/2027	10/13/2028	Q1-2024: Project ISD delayed due to prioritization.
TPP	Midway-Kern PP Nos. 1,3 and 4 230 kV Lines Capacity Increase (Midway 230kV Bus Section D Upgrade Project)	In Flight	4/7/2021	8/29/2025	10/8/2027	Q1-2024: Project ISD delayed due to prioritization.

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# PG&E Projects Status Summary

## TPP Projects with delays (6+ months)

Project No.	Scope	Status	Planned * Const. Start	Previous TDF Report Dated	Planned ** In-Service	Comments
TPP	Lockeford-Lodi Area 230 kV Development The Lockeford-Lodi Area 230 kV	In-Flight	4/5/2028	6/8/2029	12/25/2029	Q1-2024: Project ISD delayed due to CPCN permitting process and schedule/construction sequencing date adjustments.
TPP	Vaca Dixon Area Reinforcement	In-Flight	5/12/2026	4/29/2026	4/12/2027	Q1-2024: Project ISD delayed due to extended duration needed for permit (PTC) and land purchase.
TPP	Vierra 115 kV Looping Project	In-Flight	3/29/2024	7/31/2026	5/6/2027	Q1-2024: Project ISD delayed due to schedule/construction sequencing date adjustments.
GIP C12P2-LDNUs overlap	Manteca-Ripon-Riverbank-Melones Area 115 kV Line Reconductoring Project Reconductor 2.4 miles between Manteca and Ripon Jct and 1.8 miles between Riverbank SW STA and Valley Home Tap	In-Flight	4/18/2028	5/31/2028	2/2/2029	Q1-2024: Project ISD delayed due to schedule/construction sequencing date adjustments.
TPP	Red Bluff-Coleman 60 kV Reinforcement	In-Flight	8/15/2025	5/23/2028	3/6/2029	Q1-2024: Project ISD delayed due to schedule/construction sequencing date adjustments.
TPP	Weber-Mormon Jct 60 kV Line Section Reconductoring Project	In-Flight	11/15/2028	5/31/2027	2/2/2029	Q1-2024: Project ISD delayed due to schedule/construction sequencing date adjustments.

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# PG&E Projects Status Summary

## Reliability Network Upgrades

Project No.	Scope	Status	Planned * Const. Start	Previous TDF Report Dated	Planned ** In-Service	Comments
GIP 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	In-Flight	6/6/2024	1/1/2025	11/21/2024	Q1-2024: Long Lead Material Received. Proceeding to construction contracts for Release to Civil Construction in March for CB142. Construction Start in April for CB172.
GIP 20rsmt-5	Tesla 500 kV circuit breaker 612 overstress Replace Tesla Substation 500 kV CB 612 and associated switches/relays	In-Flight	10/30/2024	2/18/2025	3/30/2026	Q1-2024: On 1/17/2024, a supplier informed that the circuit breakers are delayed until March 2024. Due to clearances, the project has deferring construction start to Q4 2025 with a projected in-service date of Q1 2026.
GIP 20rsmt-7b	Tesla 500 kV circuit breakers 542 and 642 overstress Replace Tesla 500 kV circuit breakers 542 and 642 with 63 kA interrupting capability	In-Flight	1/26/2024	5/3/2024	6/30/2025	Q1-2024: On 1/17/2024, a supplier informed that the circuit breakers are delayed until March 2024. Due to clearances, the project has deferring construction start to Q4 2024 with a projected in-service date of Q2 2025.
GIP 21rsmt-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	In-Flight	4/19/2027	3/29/2029	10/18/2029	Q1-2024: Project restarted with planned engineering completion in 2024. Project will plan to order materials during the scoping phase.

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# PG&E Projects Status Summary

## Reliability Network Upgrades

Project No.	Scope	Status	Planned * Const. Start	Previous TDF Report Dated	Planned ** In-Service	Comments
GIP 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	Initiating	2/19/2026	10/16/2025	6/9/2027	Q1-2024: Project is in the process of requesting circuit breakers. If the Project cannot locate non-long lead options, the Project will become subject to significant 230kV Circuit Breaker lead times with supplier estimates of 4-1/2 years. The Project is working on improving the stated ISD.
GIP C13P1-GPN04	Metcalfe Substation 230 kV capacitor circuit breakers 654, 664, 674 and 684 overstress Replace Metcalfe Substation 230 kV capacitor circuit breakers 654, 664, 674 and 684	In-Flight	9/15/2025	5/1/2027	5/30/2029	Q1-2024: Delivery date has been changed for 4 CBs. Original planned arrival Nov 2024, now March 2025. Delays the ISD of Dec 2026 to May 2027. Working through contracts for breaker orders. ISD at risk due to new lead times on 230kV breakers - 4-1/2 years.
GIP C13P1-KPN02	Convert Midway Substation 230 kV Bus D to BAAH Convert Midway Substation 230 kV to BAAH in order to install bus reactors & RAS	In-Flight	3/10/2027	12/27/2027	2/28/2030	Q1-2024: Project is in the process of developing circuit breaker orders and is subject to significant 230kV Circuit Breaker lead times with supplier estimates of 3 years. Resuming project scheduled activities in March.

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