

DOCKETED

Docket Number:	22-OII-01
Project Title:	Order Instituting Informational Proceeding on Distributed Energy Resources in California's Energy Future
TN #:	271487
Document Title:	PG&E Front-of-the-Meter DERs
Description:	N/A
Filer:	J Padilla
Organization:	PG&E
Submitter Role:	Commission Staff
Submission Date:	7/15/2026 4:19:06 PM
Docketed Date:	7/15/2026

PG&E Front-of-the-Meter DERs: Portfolio, Pathways, and Lessons Learned

A review of the programs, procurement pathways, and outcomes that have shaped PG&E's FTM DER portfolio to date





PG&E's FTM DER Portfolio: What Has Been Built

PG&E's operational FTM DER portfolio has been shaped primarily by statutory mandates and specific distribution needs — the gap between authorized and delivered MW is a recurring theme

DAC-GT / Green Saver

Disadvantaged Communities Green Tariff

- Authorized by AB 327 (2013); implemented via CPUC D.18-06-027
- 20% bill discount for CARE/FERA customers in top-25% DAC census tracts
- Formally funded by GHG allowance proceeds and Public Purpose Program funds, now just PPP
- Statewide program cap of 144 MW (post-D.24-06-065)
- Active enrollment and ongoing procurement RFOs
- PG&E's MW cap is 81.48. 53.27 procured, 48.48 online.
- Projects are expensive, with a CPUC cost cap well above market rate

GTSR

Green Tariff / Shared Renewables (SB 43)

- Authorized by SB 43 (2013); 600 MW statewide cap
- Voluntary; funded by participating customers via premium
- Two components: Green Tariff (GT) and Enhanced Community Renewables (ECR)
- GT component: closed to new enrollment since being over-subscribed in 2021
- ECR component: no operational projects delivered
- D.24-06-065 closed ECR
- PG&E's MW cap is 272. 58.6 procured, 52.75 online.
- Customer costs have been volatile with heavy customer attrition when rates go up

Programs Authorized but Not Delivered

MW authorized on paper that never came online

- GTSR-ECR: discontinued in D.24-06-065 without any projects built
- CS-GT (Local Green Saver): authorized under AB 327; discontinued in D.24-06-065 before delivering MW.
- Two projects transferred to DAC-GT and later came online
- Common threads noted in the record: wholesale-based bill-credit economics, siting/interconnection complexity, program administration burden

FTM DERs as Distribution Assets

Targeted, location-specific deployments

- Garberville BESS: utility-scale storage supporting a long rural distribution line
- Enables reliable service to Southern Humboldt County
- Community Microgrid Enablement Program (CMEP) and Microgrid Incentive Program (MIP)
- [Placeholder: additional distribution BESS or microgrid deployments]



Pathways for FTM DER Development

Each pathway has a distinct driver, funding source, and delivery track record

1. Statutorily Directed Community Solar

e.g., DAC-GT / Green Saver — legislatively mandated, ratepayer- and previously GHG-funded, CPUC-set MW targets and pricing.

Driver: legislative mandate | **Track record:** active procurement, MW coming online

2. Voluntary Green Programs (GTSR)

SB 43 framework — GT component: customer premium supports utility procurement of dedicated renewables. ECR component authorized capacity but did not deliver operational projects.

Driver: statutory framework | **Track record:** GT active; ECR never delivered, now closed

3. Distribution Investment Deferral Framework (DIDF)

Annual GNA/DDOR process identified circuit-level grid needs; FTM RFOs (Fall 2021, 2022, 2023) sought DERs to defer traditional distribution upgrades.

Driver: CPUC D.18-02-004 | **Track record:** several RFO cycles; solicitation process retired via D.24-10-030 (2024)

4. FTM DERs as Utility Distribution Assets

Utility-owned or contracted BESS and microgrids solving specific local grid needs — voltage support, capacity, resilience (e.g., Garberville BESS, CMEP/MIP microgrids).

Driver: identified local grid need | **Track record:** case-by-case; deployments completed and in progress



FTM DER Use Cases and the Record of Delivery

Different use cases have produced very different rates of on-time, operational MW

Equity & Access

Extending clean-energy benefits to customers who cannot host BTM solar.

Track record → DAC-GT / Green Saver — delivering

Voluntary Green Choice

Customers paying a premium for dedicated renewable content beyond the standard tariff.

Track record → GTSR – Green Tariff — delivering

Wires Deferral / Non-Wires Alternative

DER capacity substituting for a specific, planned distribution capacity upgrade.

Track record → DIDF FTM RFO — limited delivery; process retired

Distribution Voltage & Capacity Support

Utility-directed BESS solving specific local grid problems on constrained feeders.

Track record → Garberville BESS — deployed

Community Resilience

Islandable microgrids serving critical community facilities during outages.

Track record → CMEP & MIP — deployments underway

Bulk-System Capacity / RA

FTM storage & renewables procured to meet Local RA obligations.

Track record → Difficulty due to locational constraints and project economics, challenges with charging batteries in LRAs



Deep Dive: DIDF — Process, Outcomes, and Lessons

A sustained, multi-year effort to procure FTM DERs through a locational planning framework

What DIDF Was

Origin: CPUC D.18-02-004 (grid modernization / DRP proceeding).

Annual Process:

1. Disaggregate the IEPR forecast to the circuit level
2. Grid Needs Assessment (GNA) identifies deficiencies
3. Distribution Deferral Opportunity Report (DDOR) ranks candidate deferral opportunities
4. Distribution Planning Advisory Group (DPAG) stakeholder review
5. Procurement pathways:
 - FTM DIDF RFO (Fall 2021, 2022, 2023)
 - Standard Offer Contract (SOC) pilot – FTM
 - Partnership Pilot – BTM DERs

Current state: D.24-10-030 (Oct 2024) retired the DIDF solicitation process; DDOR replaced by the Distribution Upgrade Project Report (DUPR).

Scope: distribution capacity only (no RA, energy, or RECs), with 6–7-year delivery terms; PG&E also screened out hundreds of other candidate opportunities as non-viable.

Outcomes & Lessons

Outcomes:

- FTM DIDF RFOs conducted in Fall 2021, 2022, 2023
- Solicited vs. contracted vs. operational: ~40 candidate deferral opportunities solicited
- 2 projects reached operation by mid-2025, and no wires investment has been deferred to date
 - Independent evaluation identified few candidate deferral opportunities converting into executed deferrals
 - Contracted DERs took ~3 years to reach service against the 6–7-year delivery terms PG&E sought

Lessons observed in the record:

- DIDF created valuable transparency into distribution planning
- Aligning DER project development timelines with in-service deadlines proved difficult
- Forecast changes over the multi-year cycle affected the durability of deferral opportunities
 - Distinguishing 'contracted' MW from 'delivered on schedule' MW was a persistent challenge
 - Emphasis has shifted toward preparing the distribution grid for high electrification
 - Capacity bid by DER developers was not competitive with wires on a \$/kWh basis; short-term contracts drew no DER bids



Deliverability, Least-Cost Best-Fit, and What the Record Shows

The evaluation frameworks that shape FTM DER procurement — and the patterns they have produced

The Frameworks in Brief

- Least-Cost Best-Fit (LCBF): CPUC-required RPS/RA evaluation methodology (origin: D.04-07-029) ranking offers on price and non-price attributes — deliverability, portfolio fit, capacity value, project viability.
- Deliverability Study: CAISO-administered assessment that determines whether a resource's capacity can reach load without transmission constraints or within a local reliability area — a threshold for Full Capacity Deliverability Status and full RA value.
- Purpose: to ensure ratepayer funds procure resources that provide reliable, deliverable capacity — not just nameplate MW on paper, where outages are reported to CAISO

Where FTM DERs Have Performed Well

- Programs backed by a clear statutory mandate and dedicated funding source (DAC-GT)
- FTM storage sited to solve a well-defined, co-located grid need (Garberville BESS)
- Utility-directed distribution assets and microgrids with identified in-service dates and interconnection paths
- Common thread: certainty about location, funding, timing, and deliverability at the time of procurement

Where the Record Shows Variability

- Authorized MW vs. operational MW: multiple programs have shown a material gap (e.g., GTSR-ECR, CS-GT)
- Timing: DER project development often does not align cleanly with the year in which capacity was assumed
- Deliverability outcomes can materially change a resource's contribution to capacity/reliability from what was originally counted
- Locational specificity: FTM DER value is highly site-dependent; changes in forecast or grid conditions can affect that value over time
- Common thread: a meaningful distinction exists between MW announced, MW contracted, and MW that reliably show up when and where planners expect them

The Deliverability Process Is a Reliability Safeguard

- The deliverability process exists to protect grid reliability; engineering a workaround to it — such as re-classifying FTM generation as load-modifying — jeopardizes reliability and the market mechanisms that support it.
- Any development pathway created for FTM DERs should include deep collaboration with the CAISO, which is responsible for the reliability of the system.

Thank You

Katie Gallinger

katie.gallinger@pge.com

