# Clean Coalition

## Community Microgrids Development Pathways in California

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# Stages of Community Microgrid Development in California

| Stage | Approximate time* |
|---|---|
| **Stage 1: Consultation**<br>• Program introduction<br>• Technical consultation<br>• Application preparation | 6 months |
| **Stage 2: Application and scoring**<br>• Application submittal<br>• Eligibility screen, score and award decision | 2-3 months |
| **Stage 3: Studies**<br>• Interconnection studies<br>• Microgrid island studies | 1-1.5 years |
| **Stage 4: Development**<br>• Project implementation plan<br>• Microgrid operating agreement<br>• Project Development | 1.5 – 3 years |
| **Stage 5: Operation**<br>• Performance obligations | 10+ years |

**Conclusion: Maximizing certainty is critical for successful deployments. This includes should promoting process, design, and cost certainty.**

***Image from PG&E's Community Microgrids Webpage***

# Microgrid Incentive Program (MIP)

- $200 million for Community Microgrids at critical facilities in disadvantaged or tribal communities.
  - PG&E – $87.2 million, SCE – $91.34 million, SDG&E – $21.46 million
- Up to $14 million per project for design/engineering & $1 million to reimburse interconnection costs.
- Funding is only eligible for front-of-meter assets. BTM assets can be included but will receive no funds.
- Community Microgrid must be designed to serve 100% of load for at least 24 hours.
- Scoring is divided by the amount of funds requested → More funding = lower score
- Application Window #2:
  - SCE: August-November 2025 / PG&E – Not Announced / SDG&E – Not Announced

**A**

**Vulnerable to Outages**
Microgrid must be located in one of the following areas:

- Tier 2 or 3 High Fire-Threat District
- Area that experienced prior PSPS outage(s)
- Elevated earthquake risk zone
- Locations with lower historical reliability

The local or tribal government leadership may be able to justify other forms of vulnerability.

**B**

**Disadvantaged and Vulnerable Community**
Microgrid must be located in a DVC (one of four criteria below), or power a critical community facility that primarily serves a DVC.

- Census tracts with median household incomes less than 60% of state median
- California Native American Tribal Community
- Community with highest risk per CalEnviroScreen
- A rural area

**C**

**Technical Eligibility**
Microgrid must:

- Be able to serve a minimum of 24 consecutive hours of energy in Island Mode as determined by a typical load profile within the microgrid boundary[2]

Project Resources must:

- Interconnect on a distribution line that is operated at 50kV or below
- Comply with the emissions standards adopted by the State Air Resources Board pursuant to the distributed generation certification program requirements of Section 94203 of Title 17 of the California Code of Regulations, or any successor regulation.[3]
- Have aggregate emissions, along with non-Project Resources, no greater than equivalent grid power when operating in Island Mode
  - Energy storage that is charged with grid power will be deemed to have the emissions equivalent of the average system emissions for the Utility.

# Community Microgrid Enablement Tariff (CMET)

- The CPUC adopted the Community Microgrid Enablement Tariff for all three IOUs.
  - The CMET was designed by PG&E based on lessons learned from the Redwood Coast Airport Microgrid (RCAM).
- The CMET is the framework required to study and connect a Community Microgrid, including a Microgrid Islanding Study and a Microgrid Operations Agreement.
- No resilience duration requirement (like 100% of load for 24 hours in the MIP)
- A few important changes were made to improve the viability from PG&E's original design:
  - Community Microgrids of all sizes are permitted (up from a 20 MW size limit)
  - Community Microgrids may be deployed on distribution circuits of any voltage
  - Standard application fee of $75,000 for the Microgrid Islanding Study

# CMET Shortcomings

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1. CMET treats Community Microgrids like a collection of individual resources, not a single controllable asset that can be used to provide additional value.
   - A Community Microgrid is only allowed to island when the grid goes down (e.g., black sky conditions)
   - No compensation provided for resilience or microgrid value.
   - ***Interconnection timelines will make or break these projects!*** Resources must go through individual interconnections before study as a Microgrid.
2. CMET ignores the all-important issue of financing. Existing Community Microgrid projects are feasible due to grants.
3. No additional assistance is available to disadvantaged or vulnerable communities. (The MIP offers $25,000 grants.)

# The Resilient Energy Subscription (RES) addresses three Community Microgrid financing challenges

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The RES helps finance Community Microgrids while properly valuing their significant resilience benefits, addressing these three challenges:

1. **Establishing** initial Community Microgrids to provide resilience to Critical Community Facilities (CCFs).
2. **Enhancing** Community Microgrids to offer resilience opportunities within the initial Community Microgrid footprint.
3. **Expanding** Community Microgrids to larger footprints that can guarantee resilience to a wider list of facilities and include additional communities.


*Some Critical Community Facilities (CCFs) in a Southern California community.*

# Resilient Energy Subscription (RES) defined

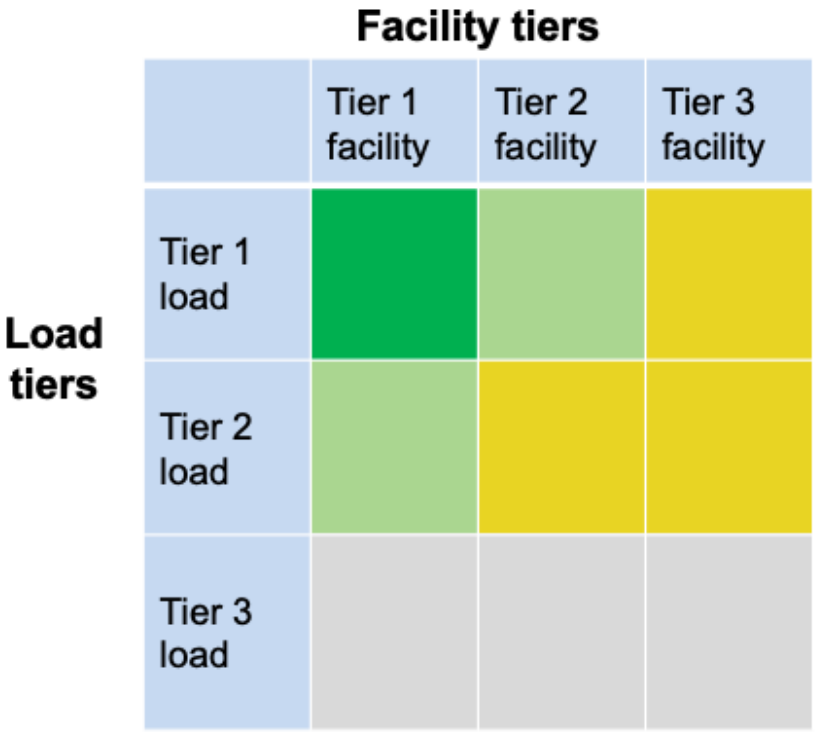
- A straightforward fee-based market mechanism that finances the enhancement and expansion of Community Microgrids
  - Community Microgrids provide guaranteed daily delivery of locally generated renewable energy during grid outages, ensuring unparalleled energy resilience.

- Allows any facility within a Community Microgrid to procure this unparalleled energy resilience
  - A facility pays a simple monthly $/kWh fee — separate from any existing rate tariffs — on top of their normal electricity rates for guaranteed daily delivery of locally generated renewable energy during grid outages.
  - Usually reserved for a facility's most critical loads.

- Facilitates the deployment and expansion of Community Microgrids
  - Allows the Community Microgrid owner-operators to recover the cost-of-service (COS) required to meet contracted RES obligations.
  - COS is determined by the capital expenditures (capex) associated with Community Microgrid assets, operational expenditures (opex) associated with operations and maintenance (O&M), and an appropriate rate of return.

# VOR123 for a Community Microgrid

- The top emphasis is to provision 100% resilience for Tier 1 loads at Tier 1 facilities (the darker green square in the chart).
  - Tier 1 facilities include CCFs such as fire stations and emergency shelters — and can also include grocery stores, data centers, pharmacies, gas stations, EV charging stations, & apartment complexes that can provide sheltering-in-place during grid outages.
- The second emphasis is for Tier 1 loads at Tier 2 facilities and Tier 2 loads at Tier 1 facilities (the lighter green squares).




= Critical for the entire community, such as Tier 1 loads at Tier 1 facilities like fire stations

= Priority for the entire community, such as Tier 2 loads at Tier 1 facilities and Tier 1 loads at Tier 2 facilities like multi-unit housing facilities that can provide safe and easy sheltering in place

= Priority for individual facilities but not the entire community

= Discretionary loads that are not impactful to the community, whether on or off

# Extra Slides

- Extra Slides

# Case Study: Peak Shaving

- PG&E is not expected to roll out DERMS for at least another year.
- Community Microgrids optimize the distribution grid by effectively dispatching resources to shape load on local distribution circuits.
- For example, the Borrego Springs microgrid provides peak-shaving capabilities to mitigate system constraints and enhance power quality, demonstrating the practical benefits of islanding in a community setting.
- Clean Coalition work on a FOM BESS in downtown San Francisco shows demonstrated the ability to increase hosting capacity on a constrained feeder by 25% through optimized charging & discharging.
- Islanding to reduce reliance on transmission at peak times reduces transmission congestion, increases optimal market outcomes, and reduces the need to spend further on additional transmission infrastructure.