Distributed Energy Resource Programs Overview

Citizens Advisory Committee
April 14, 2022
DERs in Org Strategy

**Community Energy Goal:** Implement robust energy programs that reduce greenhouse gas emissions, align energy supply and demand, and provide benefits to community stakeholder groups.

**Key Tactics:**
- Create 20MW of new local renewable power sources by 2025
- Lower costs, provide resilience, and advance distributed and grid decarbonization
- Benefit underserved communities
- Identify, pilot, and develop innovative solutions
## DER Programs Summary

<table>
<thead>
<tr>
<th>Program</th>
<th>Sector</th>
<th>Timeline</th>
<th>Actual / Expected DER MWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power On Peninsula - Medical</td>
<td>Residential</td>
<td>June – December 2020</td>
<td>0.32 MW</td>
</tr>
<tr>
<td>Power On Peninsula – Residential</td>
<td>Residential</td>
<td>July 2020 – present</td>
<td>4.9 MW*</td>
</tr>
<tr>
<td>DAC-GT</td>
<td>Residential</td>
<td>January 2022 - present</td>
<td>3 MW</td>
</tr>
<tr>
<td>Government PV and storage</td>
<td>Municipal</td>
<td>Expected summer 2022</td>
<td>2.3 MW</td>
</tr>
<tr>
<td>FLEXmarket</td>
<td>Residential</td>
<td>Expected summer 2022</td>
<td>TBD</td>
</tr>
<tr>
<td>EV Managed Charging Pilot</td>
<td>Residential</td>
<td>Expected summer 2022</td>
<td>TBD</td>
</tr>
</tbody>
</table>

*MW from this program are not entirely attributed to PCE’s influence
Short term DER roadmap 2022-2023

Context

Local Generation & DERs

- POP-Resi: Sunrun
- GovPV PPA
- DAC-GT

Innovation

- NEM 3.0
- Supply chain issues/costs
- Climbing Li-Ion battery costs
- POP-Resi 2.0
- GovPV PPA (install & round 2)
- GovPV round 3
- FLEXMarket
-Managed Charging Pilot
- Vehicle to Building
- Alternative battery types
Overview
• Budget: $650k spent
• June 2020 – December 2020
• Portable solar and battery donations
• 130+ customers received equipment

Key Elements
• Medical baseline customers in HFTDs
• Close coordination with local nonprofits
• Bulk purchase discount
• Partnered with local business and nonprofits for distribution and outreach
Overview
- Budget: Up to $5.5M approved
- June 2020 – Present
- Solar+storage systems at SFH & MFH residences
- Load modification commenced January 2022

Key Elements
- Reducing peak load with storage
- Helps the grid and reduces PCE’s costs
- MFH piece delayed

Key Partners
- Sunrun
- EBCE & SVCE
- TerraVerde
- Tonma
[Current] Government PV

Overview
• Budget: Up to $8.6M approved
• Municipal solar installations with some storage
• First portfolio: 2MW solar + 0.2MW storage

Key Elements
• One of first CCA-owned procurements
• PCE signs PPA with vendor -> muni customers sign PPA with PCE
• PCE supports project development
## Pilot Portfolio: 2 MW

<table>
<thead>
<tr>
<th>Agency</th>
<th>Site(s)</th>
<th>Size (kW)</th>
<th>Design with Battery?</th>
<th>Status</th>
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<tbody>
<tr>
<td>Atherton</td>
<td>Town Hall</td>
<td>113.5</td>
<td>No</td>
<td>Approved</td>
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<tr>
<td>Belmont</td>
<td>Belmont City Hall</td>
<td>88.5</td>
<td>No</td>
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<tr>
<td>Brisbane</td>
<td>Brisbane Mission Blue Center</td>
<td>11</td>
<td>Yes</td>
<td>Approved</td>
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<tr>
<td>Colma</td>
<td>Colma Community Center</td>
<td>61.5</td>
<td>Yes</td>
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<tr>
<td>San Mateo County</td>
<td>HSA Building</td>
<td>126</td>
<td>No</td>
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<tr>
<td>Hillsborough</td>
<td>Hillsborough Public Works Yard</td>
<td>41.8</td>
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<tr>
<td>Los Banos</td>
<td>Community Center, Waste Water Treatment Plant</td>
<td>152</td>
<td>No</td>
<td>Pending</td>
</tr>
<tr>
<td></td>
<td></td>
<td>287</td>
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<td>Millbrae</td>
<td>Millbrae Rec Center</td>
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<td>Millbrae</td>
<td>Millbrae Chetcuti Complex</td>
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<td>Pacifica</td>
<td>Pacifica Community Center</td>
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<td>Yes</td>
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<tr>
<td>Redwood City</td>
<td>Fair Oaks Community Center</td>
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<tr>
<td>San Bruno</td>
<td>Aquatic Center</td>
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<td>No</td>
<td>Pending</td>
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<td>San Carlos</td>
<td>San Carlos Youth Center</td>
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<td>Approved</td>
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<tr>
<td>San Mateo</td>
<td>San Mateo Police Building</td>
<td>170</td>
<td>No</td>
<td>Approved</td>
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</table>
[Current] Disadvantaged Community Green Tariff (DAC-GT)

Overview
- CPUC program, approved
- January 2022 - Present
- Community solar pilot
- Solicitation for new resource launched November 2021

Key Elements
- DAC customers subscribe and receive 20% bill discount
- Solar installation located in a DAC
- Long-term PPA w/ solar vendor reimbursed by CPUC

Key Partners
- Solar vendor TBD
- Community outreach partners
[Under Development] EV Charge Management

Overview
• Pilot phase
• Residential EV manage charging
• Goals: reduce peak load; test incentive structures

Key Elements
• Vehicle telematics-based controls
• Aiming to enroll 1,000-2,000 vehicles
• Partners: UC Davis
[Under Development] FLEXmarket: VPP

Overview
• Budget: TBD
• Virtual power plant
• CPUC funded program

Key Elements
• Pay for performance program
• Piggybacking off MCE and EBCE’s pilots
• Program design underway; likely focused on building electrification
• Partners: Recurve, Calpine, Aggregators
FLEXmarket Framework