Organizational Priority: Contribute to our region reaching its goal to be 100% greenhouse gas-free by 2035

Community Energy Programs: Implement robust energy programs that reduce greenhouse gas emissions, align energy supply and demand, and provide benefits across the community.

A. Decarbonization Programs: Develop market momentum for electric transportation and initiate the transition to clean energy buildings

B. Distributed Energy Resources: Support decarbonization and local power development

C. Community Benefits: Deliver tangible benefits throughout our diverse communities

D. Innovation and Scale: Leverage leadership, innovation and regulatory action for scaled impact
Programs Responsibilities

Manage customer-facing programs

- Develop strategies to advance strategic objectives
- Issue RFPs and manage contracts with providers
- Approve rebate applications and respond to inquiries
- Analyze needs and results to improve impact
- Serve as subject matter experts to policy teams
- Address compliance reporting requirements
Programs Team

Rafael Reyes, Director of Programs
Strategic direction, partnerships and policy

Phillip Kobernick, Programs Manager
Transportation Electrification

Blake Herrschaft, Programs Manager
Building Electrification

Peter Levitt, Programs Manager
Distributed Resources

Alejandra Posada, Associate Programs Manager
Building Electrification

Joe Ficalora, Associate Programs Manager
EV Infrastructure

Carlos Moreno, Programs Specialist
Transportation Electrification and other
San Mateo County 2019 GHG Emissions

Total Emissions: 4.1 Million MT CO2e

- **Transportation**: 49.7%
- **Building Methane**: 28.9%
- **Electricity**: 6.4%
- **Stationary Sources**: 5.0%
- **Solid Waste**: 9.4%
- **Wastewater**: 0.4%
- **Water**: 0.1%

- **Leakage emissions are not accounted for so Building Natural Gas emissions may be up to 50% larger.**
- **Air travel and embedded carbon of products not included**
PCE GHG Reduction Scope

• Primary Scope
  o Transportation
    o private passenger, local gov & small commercial fleets,
    o ride-hailing, alternative mobility
  o Buildings
    o residential (single family & small multifamily),
    o Office (incl. local gov.), small commercial

• Not in scope, or limited* (others lead)
  o Transportation: heavy-duty vehicles, off-road
  o Buildings: industrial, large commercial*, large multifamily*
  o Non-energy: land-use, compost, stationary sources, landfills
  o Out of territory: SF airport
  o Embedded carbon, Climate Adaptation, Sequestration/restoration
How We Effect Change

Influence Individual Decisions
- Energy, Tech, Methods, Data

Shape Policy
- Incentives, Technical Assistance, Persuasion
- Reach Codes, CALGreen, CPUC, etc.

Foster Innovation

Peninsula Clean Energy must
- be known and trusted
- communicate, persuade and engage
- satisfy and retain customers
Programs Portfolio

- New
- Res
- Res & Com
- Muni
- Private
- Transportation
- Fleet
- Distributed Resources
- Buildings

- Existing
- Appliance incentives
  - Income-qualified homes
- Marketing & training
- New mobility
  - E-bikes
  - Ride-hailing
- Fleet
  - Muni fleets
- EV incentives
  - EV charging incentives
  - & technical asst.
  - Marketing & training

- Reach codes
  - Technical asst.
- Solar + storage
- Virtual power plant
- Resilience centers
  - Solar + storage
Community Energy Programs Update – As of April

<table>
<thead>
<tr>
<th>Key Performance Indicators (Measured on CY)</th>
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</thead>
<tbody>
<tr>
<td>----------------</td>
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<tr>
<td>Transportation: GHG Reductions (MT)</td>
</tr>
<tr>
<td>Buildings: GHG Reductions (MT)</td>
</tr>
<tr>
<td>EV charging ports installed (#)</td>
</tr>
<tr>
<td>Electric appliances installed (#)</td>
</tr>
<tr>
<td>Local Resources (MW)</td>
</tr>
<tr>
<td>Funds for Low Income</td>
</tr>
</tbody>
</table>

1. 2025 targets were updated in September 2022
2. All figures cumulative except Funds for Low Income
3. Overall County GHGs when last inventoried in 2019 were 4,100,000 MT
4. GHG measures reflect projected future average annual reductions of actions taken that year (ex: adopted reach codes, charging installed, EVs acquired, etc.)
5. 2021 year electric appliances count updated to reflect addl. units not previously accounted for including electric panels

* EV Charging ports in pipeline: 3,200
Highlights #1

1. **Reach Codes: 19 agencies in SM County**
   - Project with SVCE accounts for half codes in CA
   - Major innovation in building and EV code; moved state codes
   - 90,000 MT CO2 over 10 years (equivalent to 10M gallons of gas)

2. **Electric Vehicle Charging: nearly 500 ports to-date**
   - Innovation in right-sized EV charging
   - Ave per port $3,800 (compared to PG&E $18k)

3. **Solar on Public Facilities**
   - Round 1: 12 sites, 1.7 MW solar, CYQ1 2024, $17M lifetime savings
   - Round 2: ~40 sites, 6-14 MW, RFP imminent
Highlights – Underserved Communities

1. Electric Vehicles: 346 vehicles (income qual.)
   - $3.6 million in savings over 10 years
   - 18,000 MT CO2 over 10 years

2. Home Upgrade: 190 homes completed
   - Home repairs plus electrification
   - Target: ~300 homes

3. Ride-hailing EVs: 100 EVs with Lyft
   - Ave. 120 mi/day: GHG benefit, driver income
   - 250,000 rides, over 3 million miles
Pilots

1. **EV Managed Charging**
   - Major load shaping: 7 kWh/EV, current: 40,000, future: 600,000+
   - Through the vehicles – telematics based

2. **Whole Home & 120V HPWH**
   - Advanced design guidelines (electrify in 100A)
   - Lower install costs

3. **Advanced building system pilot (Harvest Thermal)**
   - Major innovation, combined space & water heating, “grid aware”
   - 4 of 4 installs completed, data collection in progress
   - 70-90% reduction in home emissions
Deepening Customer Relationships (residential)

- SCP providing Energy mgmt. app
- SVCE providing marketplace
- EBCE and CalChoice developing PPAs
- Expert info & market
- Incentives
- Loans
- Apps & Devices
- Power
- Transactional Service
- Trusted Provider
- Partner
Residential Electrification – “BE v2”

“I want to choose”
(DIY or self-managed)

“Just get it done” &
“It’s an emergency”

"I cannot afford this"
(low income)

Retail Partners
- Brick & mortar presence
- Dev supply chain
- Bulk buy

One-Stop Website
- Appliance marketplace
- Contractor network
- Energy calculator
- Info & education
  Why, how, rebates, etc.

Hotline
- Program navigation
- Project planning
- Technical guidance

Turnkey install option
- Appliance install
- Bulk buy
- Emergency loaner
- Workforce development
- Whole home pre-wiring
- Pilot tech

Finance Options
- PCE financing
- Third-party financing

Load Shaping
- PV + Storage

Rebates
- CPUC Flex market
- PCE rebates
- BayREN rebates
- IRA rebates
- CEC rebates
Vision for Home Upgrade v2

- Scale to Whole Home
- Increase Homes Impacted per Year
- Capture Federal & State Incentives
- Integrate with Turnkey Offering
- Develop VPP
Leveraging Home Upgrade

Dedicated workforce can support turnkey projects for non-low-income customers

Equipment discounts available to all customers

Advanced designs inform program improvements

Home Upgrade Program Components

Dedicated workforce
- Specifically trained
- Whole home experience
- Dedicated contractors

“Bulk buy” discounts

Embedded innovation
- Pilot new tech
- Virtual Power Plant (VPP)
- Advanced designs
### Near-term Roadmap

<table>
<thead>
<tr>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
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</thead>
<tbody>
<tr>
<td><strong>Buildings</strong></td>
<td>Reach Codes - New Blds</td>
<td>Reach Codes v2 - New &amp; Existing</td>
<td>Appliances: HPWH</td>
<td>Zero pct loan, multiple measures</td>
<td>Building Electrification v2 (turnkey, one-stop shop)</td>
<td>Home Upgrade v2</td>
<td>VPP homes</td>
</tr>
<tr>
<td><strong>Local Generation &amp;</strong></td>
<td>Resi solar &amp; storage v1</td>
<td>Solar &amp; storage on public buildings</td>
<td>Round 1 installs, Round 2 start</td>
<td>Round 3 start (w/ sector expansion)</td>
<td><strong>Transportation</strong></td>
<td>EV Incentives</td>
<td>Used EV</td>
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<td><strong>Innovation</strong></td>
<td>EV Managed Charging Pilot I</td>
<td>EV Managed Charging Pilot II</td>
<td>Harvest Thermal</td>
<td>120V WHs &amp; Whole Home</td>
<td>Rate design &amp; policy for building electrification</td>
<td>Alt. battery types &amp; LDES</td>
<td>Vehicle to Building pilot</td>
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<td><strong>FLEXMarket</strong></td>
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<td><strong>EV Incentives</strong></td>
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<td><strong>EV Rentals</strong></td>
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<td><strong>E-Bikes (annual rounds)</strong></td>
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<td><strong>EV Charging Incentives &amp; Tech Asst</strong></td>
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<td><strong>Gov Fleets</strong></td>
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<td><strong>3rd pty &amp; project financin...</strong></td>
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<tr>
<td><strong>Resi solar &amp; storage v2</strong></td>
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<td><strong>Solar &amp; storage on public buildings...</strong></td>
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<tr>
<td><strong>Round 1 installs, Round 2 start...</strong></td>
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<td><strong>Round 3 start (w/ sector expansion...</strong></td>
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## Budget

<table>
<thead>
<tr>
<th>Expenses</th>
<th>FY24 Adopted Budget</th>
<th>FY25 Forecast</th>
<th>FY26 Forecast</th>
<th>FY27 Forecast</th>
<th>FY28 Forecast</th>
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<tbody>
<tr>
<td>Buildings - Codes</td>
<td>276,000</td>
<td>250,000</td>
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<td>Buildings - Existing</td>
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<tr>
<td>Home Upgrade</td>
<td>2,000,000</td>
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<td>Appliance Incentives</td>
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<td>Local Gov Electrification</td>
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<td>EV - Vehicles</td>
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<td>EV - Managed Chg</td>
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<td>EV-Chg - EV Ready</td>
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<td>EV - Fleet</td>
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<td>363,000</td>
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<td>EV - Alt Mobility</td>
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<td>ebikes</td>
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<td>330,000</td>
<td>363,000</td>
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<td>ride-hailing</td>
<td>75,000</td>
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<td>DER - Gov Solar</td>
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<td>GovPV1 O&amp;M Expenses</td>
<td>60,000</td>
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<td>GovPV2 O&amp;M Expenses</td>
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<td>DER-Residential</td>
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<tr>
<td>Pilots &amp; Grants</td>
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<td>Local Govs</td>
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<tr>
<td>Other/misc/uncategorized</td>
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<tr>
<td><strong>Expense Totals</strong></td>
<td><strong>$ 12,726,000</strong></td>
<td><strong>$ 22,160,000</strong></td>
<td><strong>$ 25,781,000</strong></td>
<td><strong>$ 30,355,000</strong></td>
<td><strong>$ 32,935,000</strong></td>
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</tbody>
</table>

*FLEXmarket revenues not shown*
## Budget – Capital Programs

<table>
<thead>
<tr>
<th>Balance Sheet</th>
<th>FY24 Adopted Budget</th>
<th>FY25</th>
<th>FY26</th>
<th>FY27</th>
<th>FY28</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBF capital expenses</td>
<td>3,000,000</td>
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<tr>
<td>OBF revenues</td>
<td>(180,000)</td>
<td>(950,000)</td>
<td>(1,520,000)</td>
<td>(2,090,000)</td>
<td>(2,660,000)</td>
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<tr>
<td>GovPV1 CapEx &amp; ITC</td>
<td>7,400,000</td>
<td>(3,000,000)</td>
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<tr>
<td>GovPV2 CapEx &amp; ITC</td>
<td>43,000,000</td>
<td>(15,000,000)</td>
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<tr>
<td>GovPV1 Revenue</td>
<td>(200,000)</td>
<td>(425,000)</td>
<td>(423,000)</td>
<td>(420,000)</td>
<td>(415,000)</td>
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<tr>
<td>GovPV2 Revenue</td>
<td>(3,000,000)</td>
<td>(3,000,000)</td>
<td>(3,000,000)</td>
<td>(3,000,000)</td>
<td>(3,000,000)</td>
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<tr>
<td><strong>Balance Sheet Net</strong></td>
<td><strong>10,020,000</strong></td>
<td><strong>38,625,000</strong></td>
<td><strong>(16,943,000)</strong></td>
<td><strong>(2,510,000)</strong></td>
<td><strong>(3,075,000)</strong></td>
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</table>