Ana Barajas Santiago
Agenda

1. Team
2. Goals
3. Emissions Inventory
4. Program Objectives
5. Program Roadmap
6. Current Programs
7. Looking Ahead
Programs Team

Rafael Reyes, Director of Programs
• Leads strategic direction and partnerships

Phillip Kobernick, Programs Manager
• Will lead design and implementation of new EV programs (starts July 22)

Alejandra Posada, Programs Specialist
• Leads Ride & Drive and EV Incentive Programs

Peter Ambiel, Programs Specialist
• Leads EV Infrastructure Programs
Open Position: Building Electrification Programs Manager

- **Role**: Lead strategy development and implementation for building electrification and associated load shaping programs

- **Required Qualifications**:
  - BA/BS degree in engineering, environmental studies, business or other related fields.
  - A minimum of five-year’s experience in energy-related building science, program design and management, and energy efficiency or distributed renewables project implementation.
  - Expertise with building electrification and efficiency strategies and deployment.
  - Advanced capabilities in project management.
  - Demonstrated ability to develop and maintain complex partnerships.
Goals

• PCE Goals (subset)
  • 100% renewable energy by 2025
  • 20 MW of new local power by 2025
  • Economic development and equity

• State Goals
  • 5M EVs by 2030
  • 1,325 MW of storage by 2020
  • 100% ZEV Transit Buses by 2040
  • GHG-free by 2045 (EO b-55-18)
San Mateo County Emissions

2015 RICAPS EMISSIONS INVENTORY
Current “Back of Envelope” Calculation

- Transportation & Equipment: 61%
- Building Natural Gas: 20%
- Electricity: 15%
- Waste & Water: 4%

- Upstream fugitive emissions are not accounted for so NG impact is likely significantly higher.
- Air travel and embedded carbon of products not included
Program Objectives

- Speed
- PV, EV, storage
- Efficiency
- Customers
- Equity
- Workforce
- Geography

Accelerate renewables & GHG reductions

Match renewable supply & demand

Aligns with and builds capacity

Delivers benefits
Builds support

- Shape load
- Generation
- Responsiveness
- Aggregation
- Grid services
- Staffing
- Technical
- Financial

Program Strategy
High-Level Roadmap

2018 | 2019 | 2020 | 2021 >>>

Transportation
- Personal cars
- Fleets

Renewables
- Municipal
- Community

Building Electrification
- New
- Existing

Load Shape
- Analytics
- Storage
- Load Control, VGI

Innovation
- Technology Innovation

Engagement
- Community Engagement

Grants
- Significant external grants and responsive action on complementary work

Pilots
Electric Vehicles in San Mateo County: 19,000 (out of 670,000)
State Goal by 2025: 45,544 EVs in San Mateo County
Current Transportation Programs

- EV Ride & Drive Campaign
- New EV Dealer Incentive Program
- DriveForward Electric (Low Inc EV Program)
- EV Charging Infrastructure Program (in development)
EV Ride & Drive Campaign

Program
• Test drives for “conversion”
• Started in 2018, through end 2021
• Goal: 10-20 events per year

Status
• 8 events to date
  • 1,698 EV experiences
  • 60% of participants first-time EV experience
  • 20% of trailing survey respondents (115) adopted an EV 6 mos. after event
New EV Dealer Incentive Program

**Program**
- New EVs point of sale rebates and negotiated dealer discounts
- County-wide marketing for awareness and adoption

**Status**
- 2018 program results: 120 vehicles
- 3-month promotion period, Oct-Dec
- Continuing as 3-year program
  - 2019 incentives: $1,000 BEV, $700 PHEV
- Target: 150-300 vehicles/year
DriveForward Electric

Program
• Low- and moderate-income used EV program
• PCE point of sale incentive of $4,000
• Partner with Peninsula Family Service DriveForward Vehicle Loan Program
  • Financial educational & vehicle loans

Status
• Soft-launch in March, 7 participants to date
• Studying how to stack with other regional & state incentive programs
EV Charging Infrastructure Incentive Program

Program

- Target the needs of residents without charging access
- Infrastructure at multi-unit dwellings, workplace, and public fast charging
- Goal: 3,500 charging ports
- $16 million program over four years
  - Rebates ($12M)
  - Technical assistance
  - Education & workforce training

Status

- Under development: target launch in Q1
- Seeking additional funding from CEC, AQMD and coordination with Electrify America
Building Electrification

State GHG Goals: 1990 level by 2020, 40% below 1990 by 2030, GHG-free by 2045
Current Building Program: Reach Codes

Program

• Support the adoption of building “reach codes” that support low-carbon electric and EV-ready codes
  • Encourage all-electric
  • “Plug & play” EV ready
• City assistance: $10k grant, model codes, adoption and implementation tools
• Partners: SMCo Office of Sustainability, TRC Energy, Energy Solutions, Silicon Valley Clean Energy
• Details: www.PeninsulaReachCodes.org
### Participation to-date by Agency

<table>
<thead>
<tr>
<th>PCE Member Agency</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atherton</td>
<td>Expressed Interest</td>
</tr>
<tr>
<td>Belmont</td>
<td>Actively Engaged</td>
</tr>
<tr>
<td>Brisbane</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Burlingame</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Colma</td>
<td>Actively Engaged</td>
</tr>
<tr>
<td>Daly City</td>
<td>LOI Received</td>
</tr>
<tr>
<td>East Palo Alto</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Foster City</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Half Moon Bay</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Hillsborough</td>
<td>Actively Engaged</td>
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<tr>
<td>Menlo Park</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Millbrae</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Pacifica</td>
<td>Actively Engaged</td>
</tr>
<tr>
<td>Portola Valley</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Redwood City</td>
<td>LOI Received</td>
</tr>
<tr>
<td>San Bruno</td>
<td>LOI Received</td>
</tr>
<tr>
<td>San Carlos</td>
<td>LOI Received</td>
</tr>
<tr>
<td>San Mateo (City)</td>
<td>LOI Received</td>
</tr>
<tr>
<td>South San Francisco</td>
<td>Expressed Interest</td>
</tr>
<tr>
<td>Woodside</td>
<td>Actively Engaged</td>
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<tr>
<td>Unincorporated San Mateo County</td>
<td>LOI Received</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>SVCE Member Agency</th>
<th>Status</th>
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<tbody>
<tr>
<td>Campbell</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Cupertino</td>
<td>LOI Received</td>
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<tr>
<td>Gilroy</td>
<td>LOI Received</td>
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<tr>
<td>Los Altos</td>
<td>LOI Received</td>
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<tr>
<td>Los Altos Hills</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Los Gatos</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Milpitas</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Monte Sereno</td>
<td>(expressed interest)</td>
</tr>
<tr>
<td>Morgan Hill</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Mountain View</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Saratoga</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Sunnyvale</td>
<td>LOI Received</td>
</tr>
<tr>
<td>Uninc. Santa Clara County</td>
<td>(expressed interest)</td>
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</tbody>
</table>
## Community Pilots

<table>
<thead>
<tr>
<th>Pilot</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td><strong>Refrigerator Recycling</strong>&lt;br&gt;Old refrigerator recycling program to capture high impact GHG sources.</td>
<td>41 units collected and 14 more pending as of end of June.</td>
</tr>
<tr>
<td><strong>Peninsula Climate Comfort</strong>&lt;br&gt;Electrification retrofit pilot for 5 homes with technical &amp; financial assessment.</td>
<td>62 applications received. 5 homes have been selected, feasibility assessments expected by the end of July.</td>
</tr>
<tr>
<td><strong>Healthy Home Connect</strong>&lt;br&gt;Gap funding for home upgrades &amp; repairs for 10-16 low income homes.</td>
<td>Outreach to 75 homes completed, currently assessing prospective clients to select.</td>
</tr>
<tr>
<td><strong>Community Resilience at Faith Institutions</strong>&lt;br&gt;Recruit &amp; develop plans to equip select number of faith institutions to be community hubs with clean energy backup power.</td>
<td>Outreach ongoing to assess prospective participants.</td>
</tr>
<tr>
<td><strong>Apartment EV Carshare</strong>&lt;br&gt;Deploy select number of EV to be used for car sharing in one low income community apartment complex.</td>
<td>Identified potential host sites and will begin initial outreach this month.</td>
</tr>
<tr>
<td><strong>Municipal Green Fleets</strong>&lt;br&gt;Develop clean fuel toolkit, technical assistance to cities, and acquire pilot vehicles and scooters.</td>
<td>Input from local govs. on toolkit continues. Resource being collected and assessed and an initial website has been launched.</td>
</tr>
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</table>
## Other Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resilient Solar on Critical Facilities</td>
<td>One-year scoping project for microgrids on community facilities with East Bay Community Energy. Collecting data from municipalities, moves site assessment in Q3.</td>
</tr>
<tr>
<td>Transit and School Buses</td>
<td>Support bus electrification. Participating in Samtrans taskforce to electrify all fleet by 2030. Provided technical assistance to RWC and Ravenswood School Districts to secure CEC funding for 6 busses (3 each).</td>
</tr>
<tr>
<td>Low-Power EV Charging Pilot</td>
<td>Develop requirements, acquire and pilot 110v EV charging technology for low cost access control and billing management. RFP executed and award made to Energy Solutions to execute project. Contract is being finalized.</td>
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Looking Ahead
Transportation Next Steps

<table>
<thead>
<tr>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal</td>
<td>Ride &amp; Drives, New &amp; Low-Income Purchase Incentives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-unit dwelling &amp; Workplace</td>
<td>MUD &amp; Workplace Infrastructure Incentives &amp; Tech Assistance</td>
<td></td>
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<tr>
<td>Public Charging</td>
<td></td>
<td>Fast-charging, curbside</td>
<td></td>
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<tr>
<td>Shared Mobility</td>
<td></td>
<td>Shared Mobility</td>
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<tr>
<td>Public Light-Duty Fleets</td>
<td></td>
<td>Municipal fleets</td>
<td></td>
</tr>
<tr>
<td>School &amp; Transit Buses</td>
<td></td>
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<td></td>
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<tr>
<td>EV Cash For Clunkers</td>
<td></td>
<td>Cash for Clunkers</td>
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</tbody>
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- Develop v2 Transportation Roadmap
- Define baseline and target metrics

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Building Electrification

State GHG Goals: 1990 level by 2020, 40% below 1990 by 2030, GHG-free by 2045
Load Shape

<table>
<thead>
<tr>
<th>2018</th>
<th>2019 H1</th>
<th>2019 H2</th>
<th>2020</th>
<th>2021</th>
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</thead>
<tbody>
<tr>
<td>Tariffs</td>
<td>DER Tariff Pilot</td>
<td>Advanced Data Systems</td>
<td>Calpine CCA Insights</td>
<td>Data Platform</td>
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<tr>
<td>Dispatchable DER Platform</td>
<td>Scoping</td>
<td>Implementation</td>
<td></td>
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<tr>
<td>Local Storage</td>
<td>Storage Study</td>
<td>Local Storage Program</td>
<td></td>
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<tr>
<td>Resilience</td>
<td></td>
<td>Muni microgrids</td>
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<td>Vehicle-Grid Integration</td>
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<tr>
<td>Load Control</td>
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</tbody>
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PCE Goal by 2025: 100% renewable power