



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

AGENDA: 3

Bay Area Electric Vehicle (EV) Acceleration Plan

**Technology Implementation Office
Steering Committee Meeting
May 28, 2021**

**Karissa White
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Presentation Outcome



- Provide an update on the draft of the Air District's Bay Area Electric Vehicle (EV) Acceleration Plan
- Obtain Committee's feedback and comments on the plan



Presentation Outline



- Overview of the Acceleration Plan
- Plan Development and Release Timeline
- Bay Area EV Trends
- Market Research Data Collection Process
- Air District Goals
- Barriers and Recommendations

Presentation Requested Action



- Informational item
- Seeking feedback and comments from Technology Implementation Office (TIO) Steering Committee

Components of the Plan



- **Executive Summary**
- **Background**
- **Current Bay Area EV Ecosystem**
 - EV Adoption and Sales
 - Charging Infrastructure
 - CALGreen Codes
 - Local Reach Codes
 - Permit Streamlining
- **Insights from Market Research and Surveys**
 - Bay Area Residents
 - Ride-Hail Drivers
 - Multi-Unit Dwelling Property Managers
 - Public Fleet Managers
 - Car Dealerships
- **Accelerating EV Adoption**
 - Barriers to EV Adoption
 - Recommendations
 - Advancing Equity in the EV Market
 - Air District Investments in Advancing Equity in the EV Market
- **Conclusion**
- **Acknowledgements**

Timeline



Development



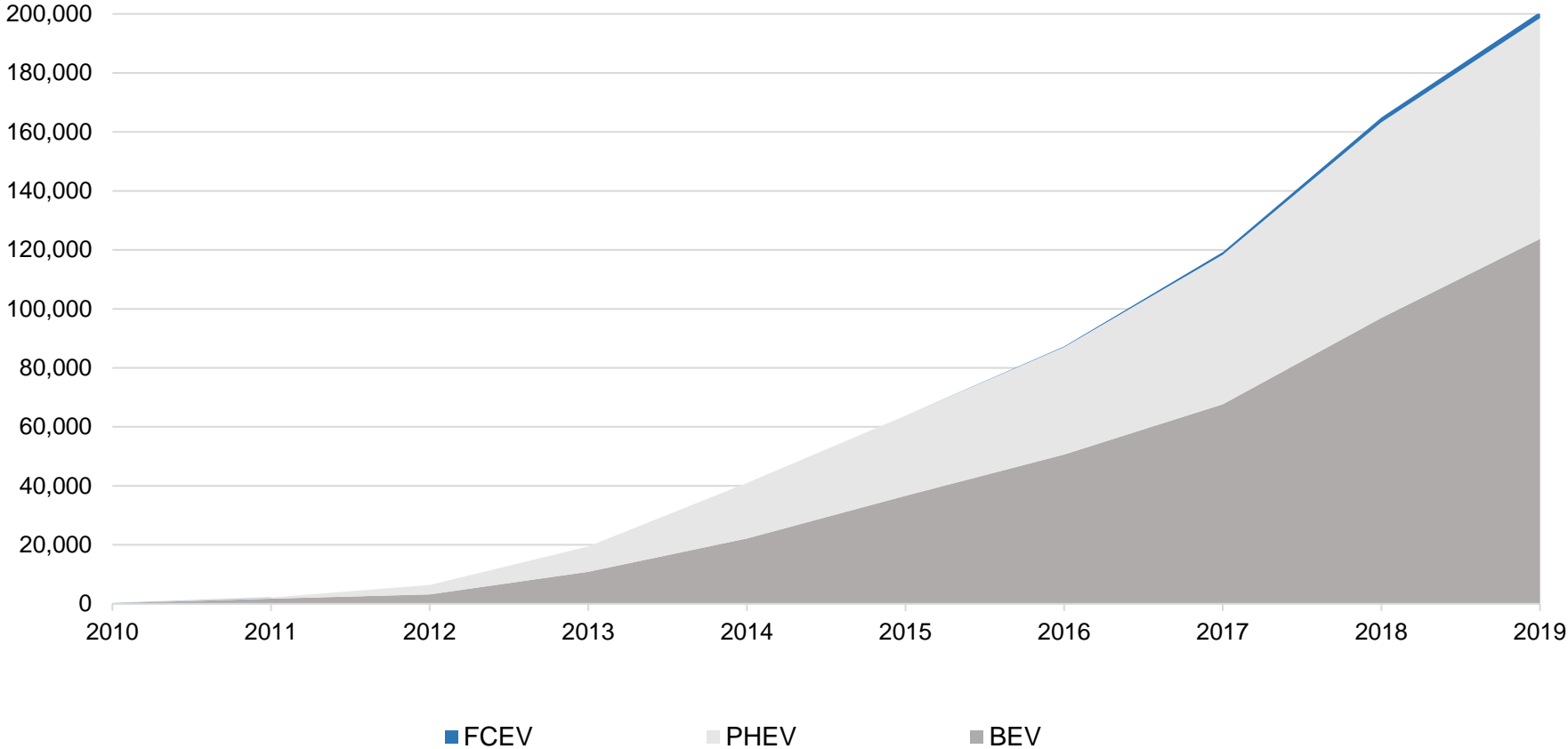
Release



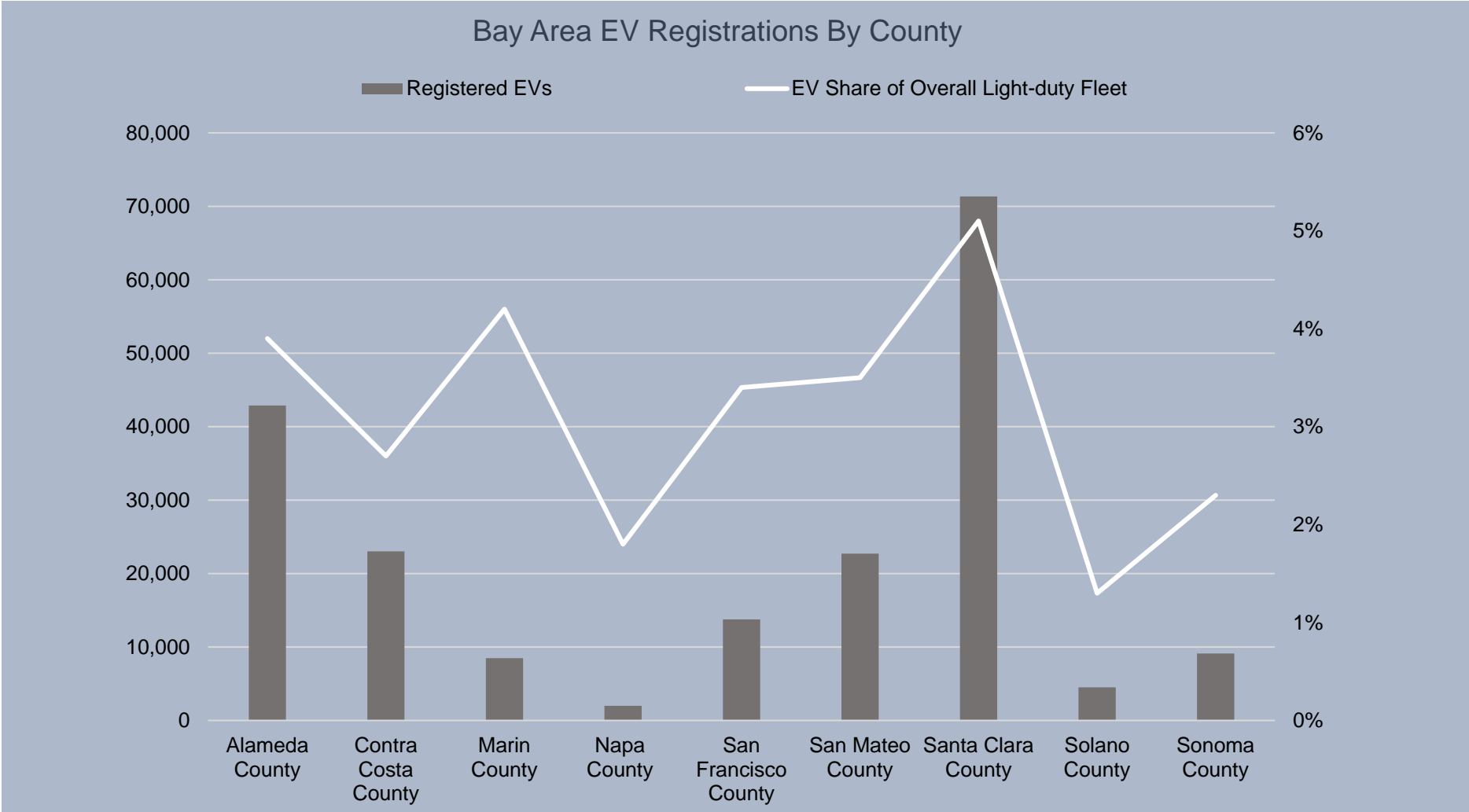
Bay Area EV Registrations



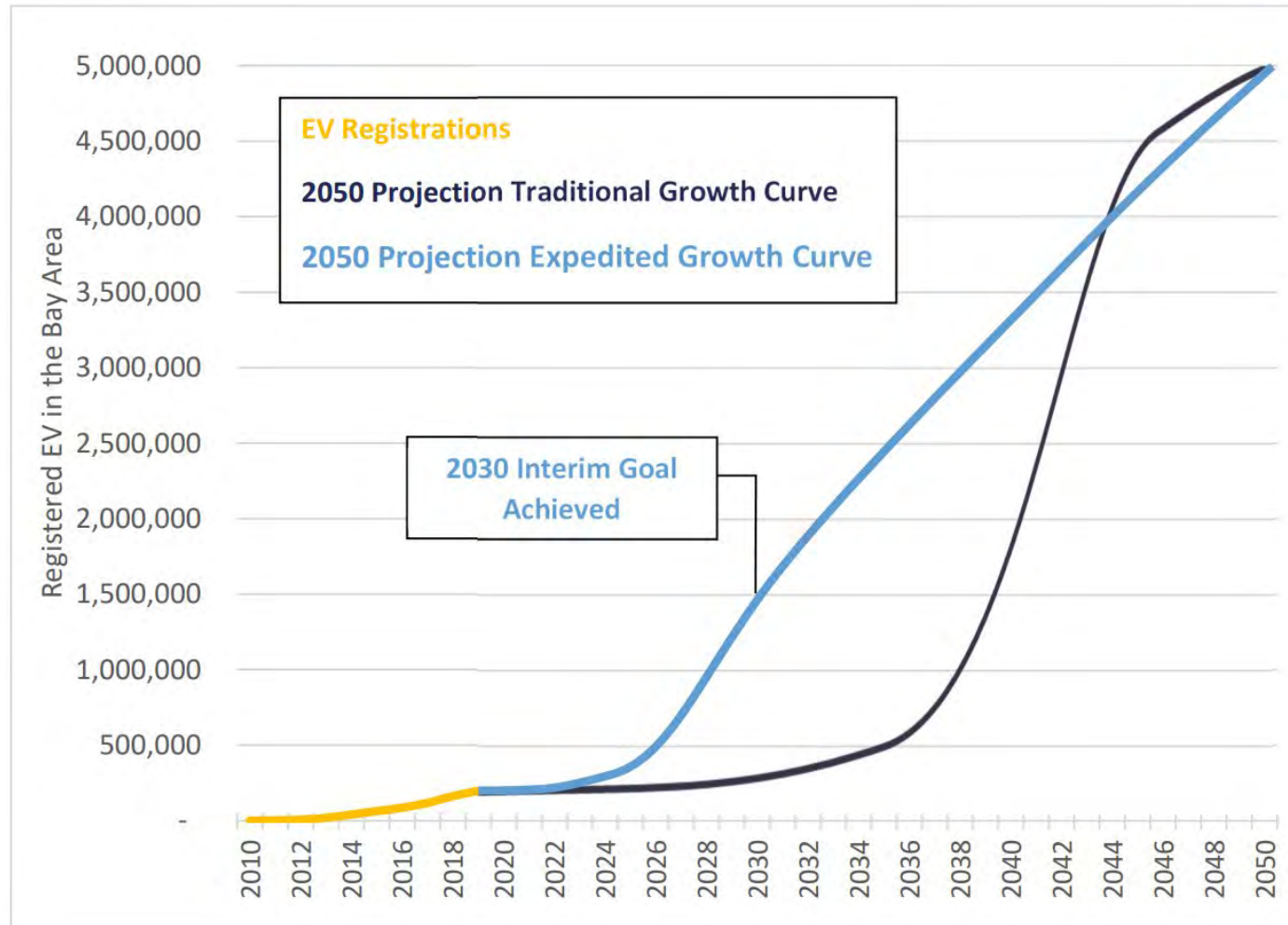
Bay Area EV Registrations Over Time



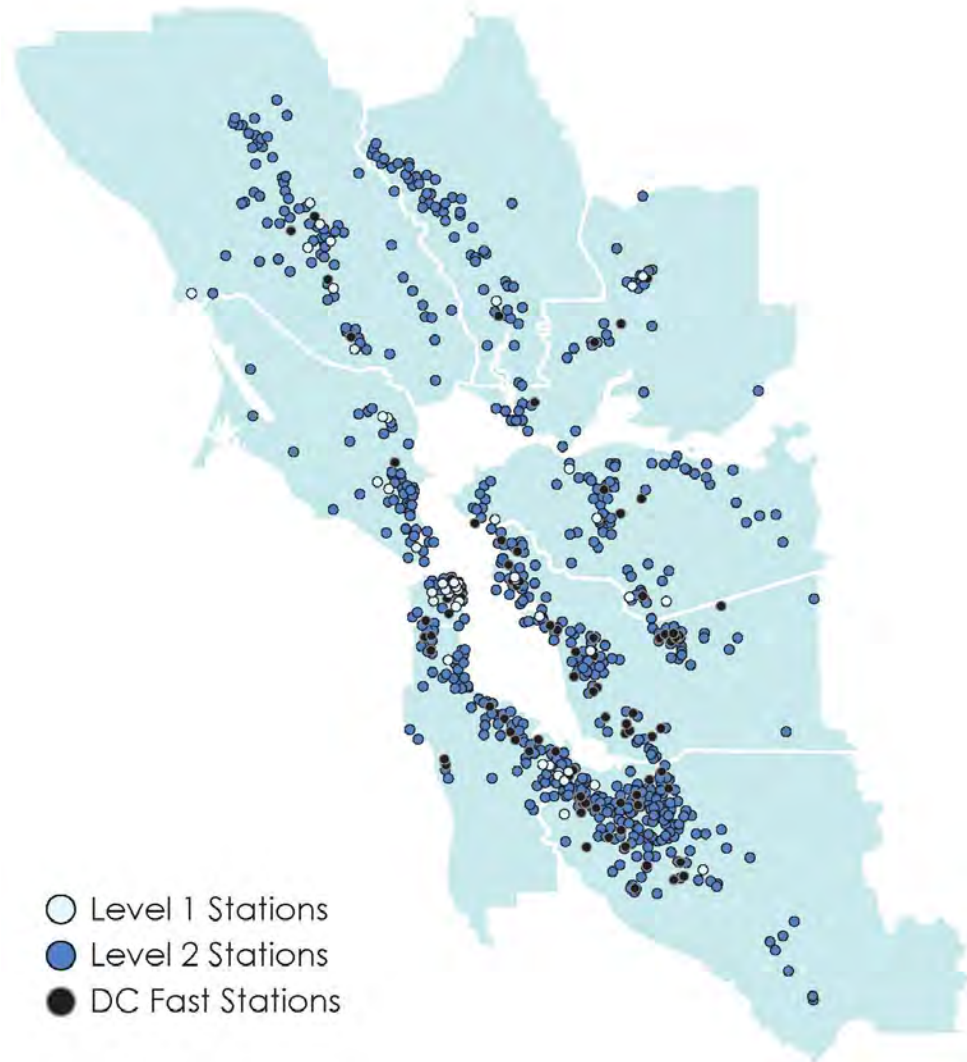
Bay Area EV Registrations



Bay Area EVs and Projected Increase to Meet 2050 Goal



Bay Area EV Charging Stations



**9,500 publicly available charging ports
(as of June 2020)**

**National Renewable Energy Laboratory
projects 20,000 publicly available charging
ports are needed in the Bay Area to
support current EV drivers**

Stakeholder Outreach



Participants

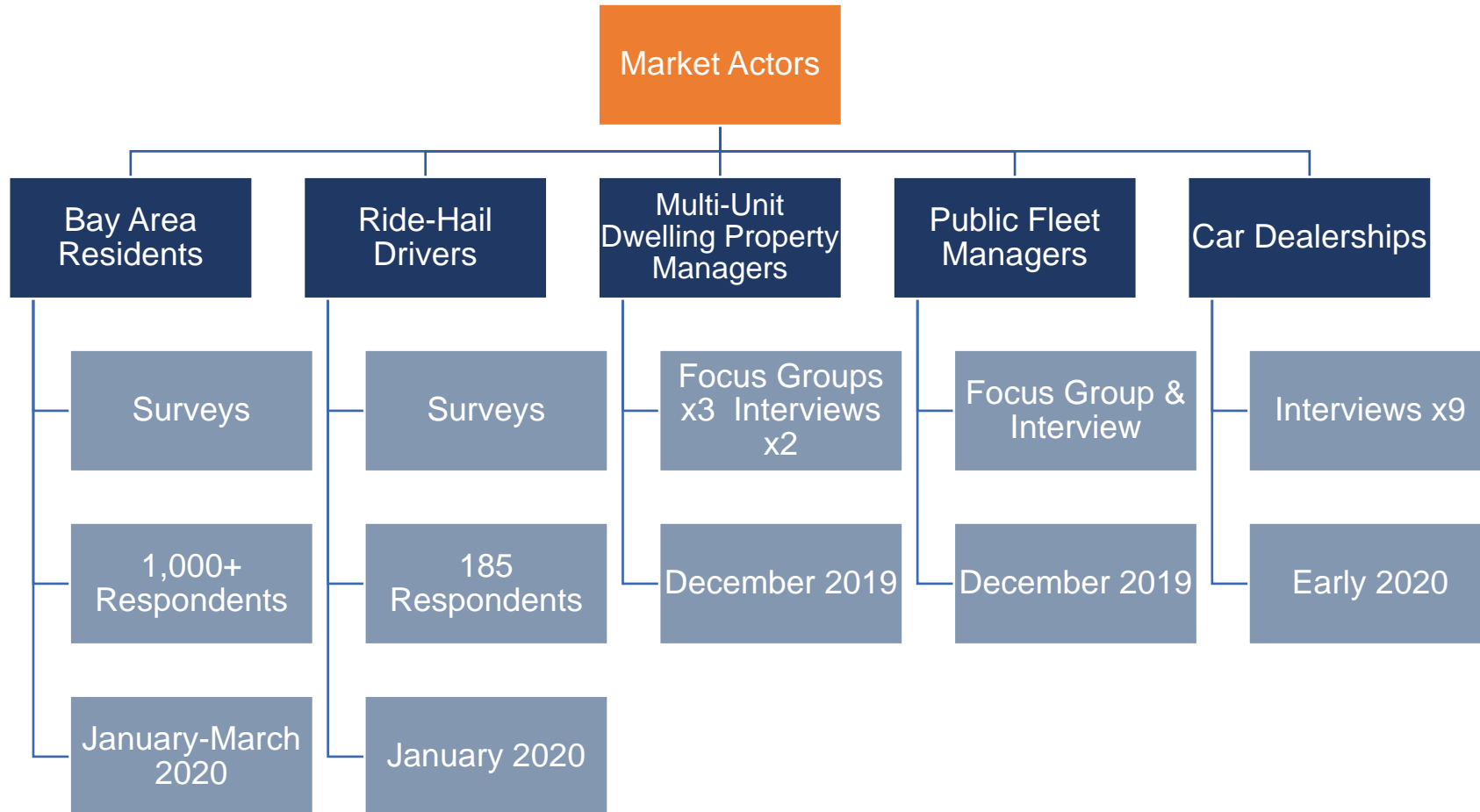
- Automotive manufactures
- Community choice aggregators
- Elected officials
- Electric vehicle service equipment (EVSE) technology
- Government organizations
- Ride-hailing companies
- School districts
- Software companies
- Universities

North Bay	San Francisco	East Bay	South Bay	Webinar
August 13 th , 2019 10am-1pm	September 4 th , 2019 1pm-3pm	August 21st, 2019 10am-12pm	September 10 th , 2019 10am-1pm	September 12 th , 2019 10am-12pm
Sonoma Clean Power 50 Santa Rosa Ave 5th Floor, Santa Rosa, CA 95404	Lyft 185 Berry St #5000, San Francisco, CA 94107 (Banana Room)	Contra Costa County 50 Douglas Drive, Second Floor Conference Room, Martinez, CA 94553	Prospect SV 1608 Las Plumas Ave, San Jose, CA 95133	Zoom Video Conferencing Registration URL: https://zoom.us/join/joinmeeting/register/3c7d1e7e0b3383f48c34be5db4a05ad8
*10 Attendees	*40 Attendees	*15 Attendees	*6 Attendees	*37 Attendees

Market Research and Surveys



Data Collection Process



Air District Goals



- Establish an interim goal of 1.5 million ZEVs in the Bay Area by 2030
- 100% of Bay Area Cities and Counties enact EV Charging Station Permitting Streamlining procedures and policies by 2022
- Increase Air District support for low-income and frontline communities
- Seek more ambitious CALGreen EV ready parking space standards in the 2022 Title 24 Code Update (for both existing and new buildings)
- 100% of Bay Area Cities and Counties enact EV ready reach codes by 2030

Barriers to EV Adoption



Vehicle Technology

- *Range*
- *Battery degradation*
- *Diversity of models*

Charging

- *Public charging*
- *Existing building upgrades*
- *Permitting*
- *Grid capacity*

Economics

- *Purchase price (internal combustion engine vs EV)*
- *Complicated grants*
- *Funding for grant programs*
- *Cost of public charging*
- *Savings realized over time*

Perceptions and Behavior

- *Misinformation about technology*
- *EVs are for the wealthy*
- *Lack of dealership EV knowledge*
- *Inconsistent data collection*
- *Limited smart charging*

Recommendations



Policy & Legislation:

- Seek more ambitious CALGreen EV ready parking spaces standards in the 2022 Title 24 Code Update (for both existing and new buildings)
- Invest in workforce training to retrain auto body workers

Financial Incentives & Rebates:

- Link EV and EVSE incentive programs for multifamily residents to ensure charging access
- Provide training for incentive program staff on how to bring a racial equity lens into their work

Outreach & Education:

- Use community specific cultural media channels to share information
- Provide support to stack rebates
- Coordinate with other grant programs on applicant demographic data to identify underserved groups

Charging:

- Develop a more accurate count of public EVSE in CA
- Increase EVSE signage along major highways
- Develop an estimate of home chargers in California to assess the share of EV drivers that charge at home versus on the go or at work.

Air District Recommendations



1. Work closely with frontline communities
2. Empower influential members of frontline communities
3. In outreach, use messages tested through surveys/focus groups.
4. Prioritizing EV charging installations at or near multi-family buildings.
5. Identify additional funding sources for the Bay Area.

Feedback Requested/Questions





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AGENDA: 4

Climate Tech Finance Impact Report

**Technology Implementation Office
Steering Committee Meeting
May 28, 2021**

**Derrick Tang
Manager
dtang@baaqmd.gov**

Presentation Outcome



- The Committee will be updated on results and lessons learned from the Climate Tech Finance Impact Report

Presentation Requested Action



- None; informational item

Presentation Outline



- Climate Tech Finance Program Overview
- Project Portfolio
- Key Lessons Learned
- Feedback & Discussion

Program Overview



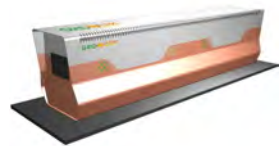
Working Capital for Business Growth

*Loan guarantees of up to
\$2.5M or 90%*

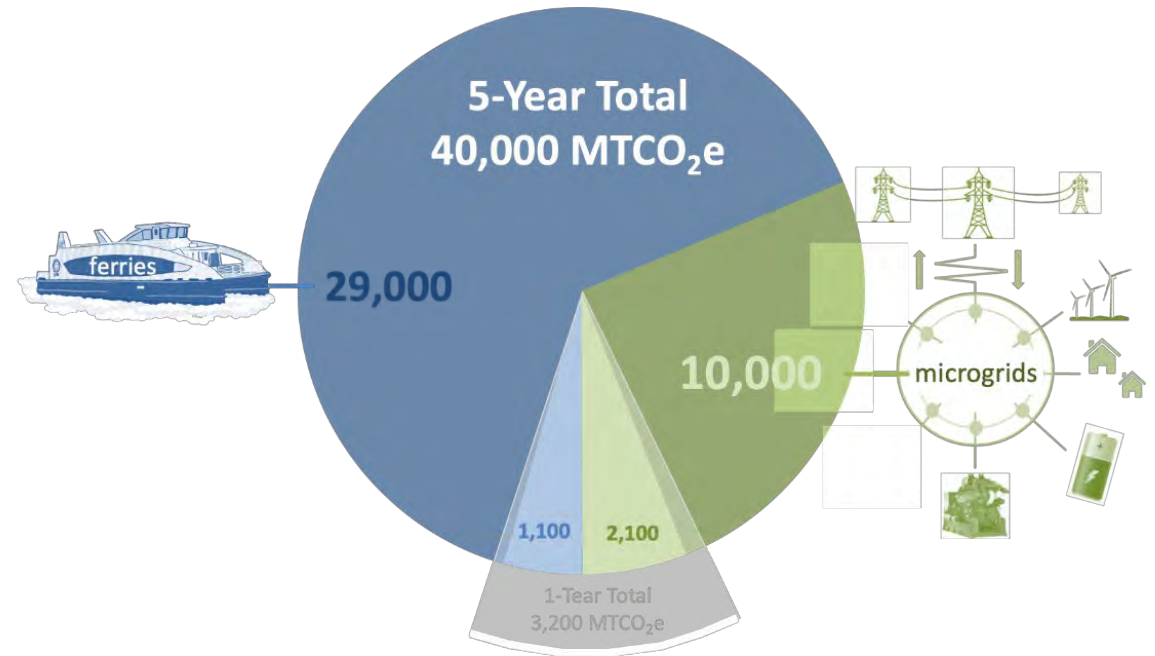
Loans for Buying Climate Tech

*Low-interest loans of up to
\$30M over 30 years*

Funded Projects



Technology	Air District Encumbrance	Total Loan Amount
<i>SW/TCH Maritime:</i> Hydrogen fuel cell ferry	\$250,000	\$5,000,000 over 5 years
<i>Gridscape Solutions:</i> Renewable microgrids as a service	\$100,000	\$1,000,000 over 1 year



Total Air District Commitment	\$350,000
Total Loan Amount Supported	\$6,000,000

Qualified Projects



Residential Battery Systems
with Integrated Demand-Response



Ultracapacitor
Technology



Demand Response
Software

In-Road Energy
Recovery at Toll Gates



Advanced Energy
Storage

Advanced Energy
Efficiency



Cooling Technology for
Data Centers

Battery-Boosted
EV Fast Charger



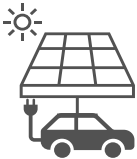
Zero-Emission
Infrastructure

Negative Carbon



Low-Carbon
Aggregate for Concrete

Solar-Powered
EV Chargers

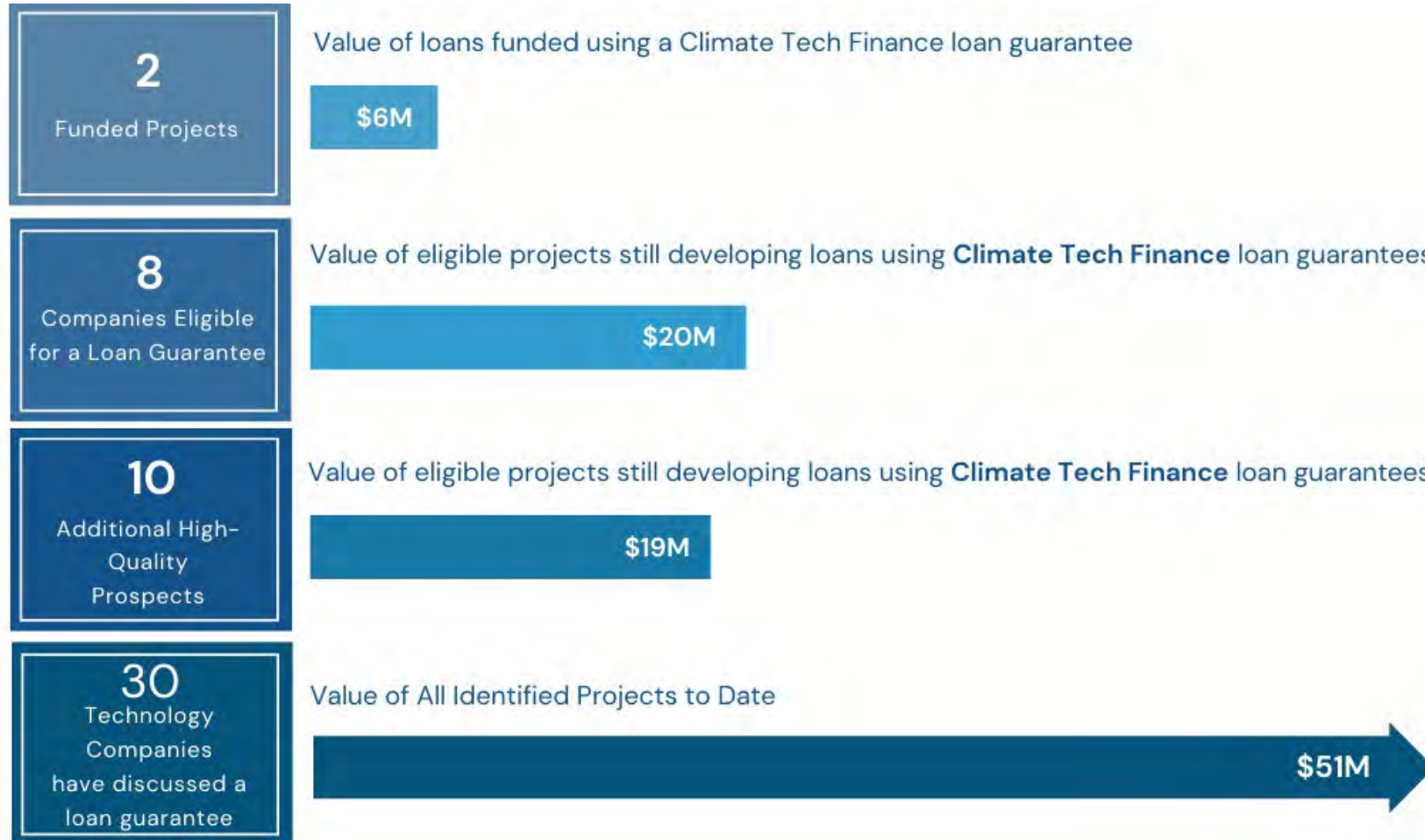


Biochar
Commercialization



Electric/Automated
Tractors

Project Pipeline





On Loan Guarantees:

- Loan guarantees increase small businesses' working capital flexibility and reinvestment potential
- Enhancing capital access works by building bank comfort with unfamiliar technologies
- Going through the process of developing a loan guarantee may itself reduce risk





On Public Sector Direct Loans:

- Current Climate Tech loans do not offer superior enough lending to spur the market
- Loans satisfy a capital need but are not a subsidy

\$500 million

Amount of loan funds dozens of climate projects are pursuing in the Bay Area.

Key Lessons Learned



On Sustainable Financing Platforms:

- Partnerships accelerate program growth
- Accelerating climate projects requires engaging with multiple clients
- Lending can leverage and revolve public funds for amplified impact

75 jobs

Created by the first two Climate Tech Finance projects

Feedback Requested



- Discussion of results and lessons learned from Climate Tech Finance Impact Report



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AGENDA: 5

Climate Tech Finance Strategic Plan

**Technology Implementation Office
Steering Committee Meeting
May 28, 2021**

**Derrick Tang
Manager
dtang@baaqmd.gov**

Presentation Outcome



- The Committee will be updated on key elements of the Climate Tech Finance Strategic Plan

Presentation Requested Action



- None; informational item

Presentation Outline



- Strategic Plan development
- Mission Statement and Key Messages
- Program Growth
- Additional Program Offerings

Strategic Plan Development



- Program has entered more mature stage after validating loan guarantee product
- Build on successes by developing focused branding and marketing to drive program growth
- Plan includes stakeholder interviews, SWOT analysis, key messages, program objectives
 - Key elements highlighted in this presentation

Stakeholder Interviews



- **Growth potential** - Interviewees identified strengths, assets, and opportunities that demonstrate potential for Climate Tech Finance's growth
- **Need for branding and marketing** – Brand needs shaping so that it properly communicates the value proposition
- **Develop sales/outreach processes** – Create systems and sales processes to grow outreach and measure efforts
- **Build on success** – Reach out to new, well-qualified clients in target markets with a clearly articulated value proposition and a portfolio of supporting materials and assets

Climate Tech Finance Mission



Mission

Reduce greenhouse gases by increasing access to capital to accelerate climate technology development and adoption

Key Audiences

Entrepreneurs, Banks, Referral Networks

Climate Tech Finance Mission Cont'd



Key Messages

- Climate Tech Finance increases access to capital to accelerate climate technology development and adoption to ultimately reduce greenhouse gases.
 - Our loan guarantee allows entrepreneurs to access debt financing, such as a loan through a community bank, so they can commercialize emerging technology faster.
- We're bridging a financial gap that has challenged many climate tech entrepreneurs.
 - Many climate tech startups stall at the commercialization stage because they are unable to secure financing.
 - Our loan guarantee increases access to capital by offsetting the risk for banks.
- We believe this unique model can accelerate climate technology adoption and will have a measurable effect on the global climate.

Program Growth



President Biden's \$1.9 trillion relief bill

- \$10B allocated to State Small Business Credit Initiative (SSBCI)
- California programs slated to receive \$900M
 - 7x more for Climate Tech Finance to leverage
- Likely to enhance loan guarantee beyond current \$2.5M max

Implications

- Our banking partner (IBank) will need to facilitate large volume of loans
- Air District contribution may have less relative impact
- Opportunity to develop additional program offerings

Potential Program Offerings



Potential Products	Potential Partners
Direct lending (loans, microloans, lines of credit) for climate projects	<ul style="list-style-type: none">• Community banks/CDFIs, credit unions• Commercial banks with climate interest (min. \$50M pilot)
Local project finance (energy and building upgrades, especially for multi-unit dwellings)	<ul style="list-style-type: none">• Private companies developing projects• Green construction and installation firms
Climate bond development	<ul style="list-style-type: none">• CA Green Bond Market Development Committee• Climate Bond Initiative

How is BAAQMD *uniquely positioned* for a Climate Lending Pilot?

- Experience with local governments
- Experience with local communities
- Air quality regulatory authority
- Technical knowledge of Bay Area facilities

Feedback Requested



- Discussion of Strategic Plan and potential program offerings