



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

**AGENDA: 15**

# **Cut the Commute Program**

**Board of Directors Meeting  
October 7, 2020**

**Lisa Fasano  
External Affairs Officer**

# Cut the Commute Program



## Cut the Commute Pledge Ceremony

- Initiated, July 13, 2020
- **Rod Sinks** – Bay Area Air Quality Management (Air District) Board of Directors (Board) Chair
- **Cindy Chavez** – Santa Clara County Supervisor, and Vice Chair of the Air District Board
- **Marci McCue** – Flipboard Vice President, Content and Communication
- **Eric Thornburg**, Chief Executive Officer, San Jose Water Co.
- **Carl Guardino**, Silicon Valley Leadership Group





Bay Area  
**Commuter Benefits Program**  
*Find a better way to work!*

- Air District and Metropolitan Transportation Commission (MTC) remote work strategies work together
- MTC establishes high level goals in 2050 Plan Bay Area
- Air District develops rule through Commuter Benefits Program
  - MTC: ambitious goal for remote work implementation
  - BAAQMD: remote work policy that includes employers and transit



Bay Area  
**Commuter Benefits Program**  
*Find a better way to work!*

- Air District policy will provide **“tool in the commuter benefits toolbox”**
- Successful Commuter Benefits Program will:
  - Reduce traffic related air pollution and greenhouse gas (GHG’s)
  - Improve mobility on congested freeways and transit
  - Provide greater equity through commute solutions rather than Single Occupancy Vehicles (SOV)

# Cut the Commute Program



- Began Air District rule development effort in August 2020
- Capitalize on what is being learned through current **Work from Home** status
- Amend current Commuter Benefits Rule, make telework more prominent as an option – create clear definition
- Working on generating partnerships with Bay Area employers, transit agencies, city, and county governments
- Presentations to:
  - Bay Area Regional Transportation Authority
  - Valley Transportation Authority Committee

# Cut the Commute Program



2pinz	David	Libby	President	Orinda
Bay Area Air Quality Management District	Jack	Broadbent	CEO/APCO	San Francisco
BAY PLANNING COALITION	JOHN	COLEMAN	CEO	OAKLAND
Cities Association of Santa Clara County	Andi	Jordan	Executive Director	Los Altos
Commute.org	John	Ford	Executive Director	South San Francisco
Espressive Inc	Patrice	Calhoun	CEO	Santa Clara
Mobileiron	Chantasone	Hennes	Senior Benefits Specialist	Mountain View
Porter Family Vineyards	Timothy	Porter	President	Napa
TDM Specialists Inc	Elizabeth	Hughes	President	South San Francisco

# Employer's Views on Remote Work



“For the vast majority of our employees, we are committing that we're going to be a flexible employer of the future. That means for some workers, they may never come back to an office.”

-Dan Spaulding, Zillow



“Opening offices will be our decision. When and if our employees come back, will be theirs.”

-Twitter



“[The company won't likely] return to the way we were because we've found that there are some things that actually work really well virtually.”

-Tim Cook, Apple



# Cut the Commute Program



## Employers Reduce Costs

- A typical employer can save an average of \$11,000 per half-time telecommuter per year\*
  - increased productivity
  - lower real estate costs
  - reduced absenteeism and turnover
  - improved disaster preparedness

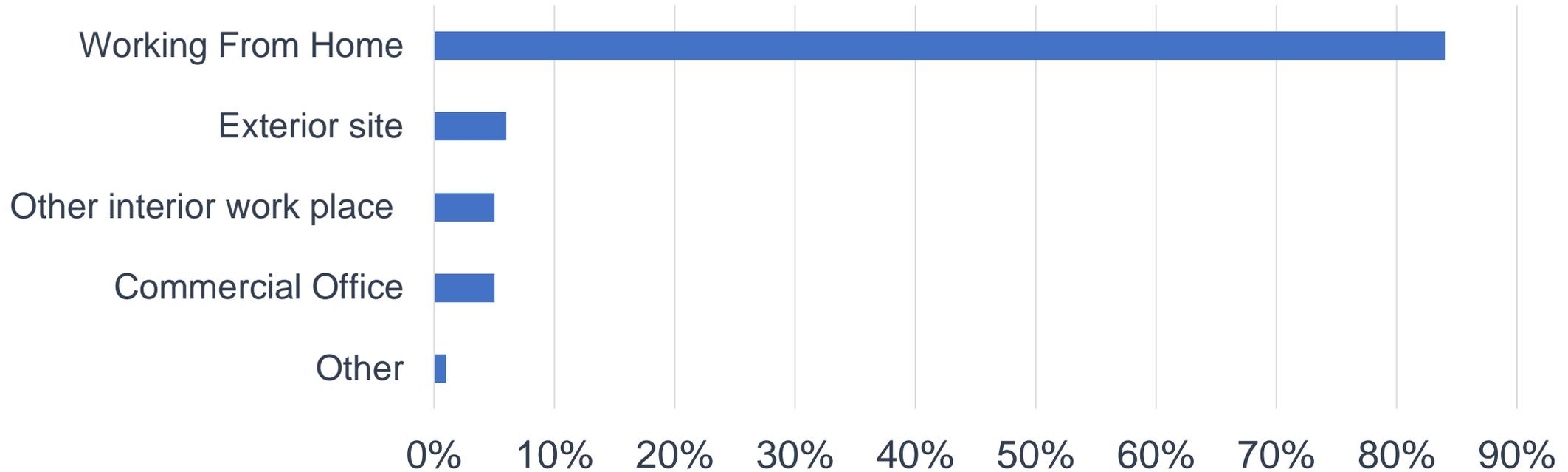


\* National Average, Not Specific to Bay Area which would be higher: <https://globalworkplaceanalytics.com/telecommuting-statistics>

# Cut the Commute Program



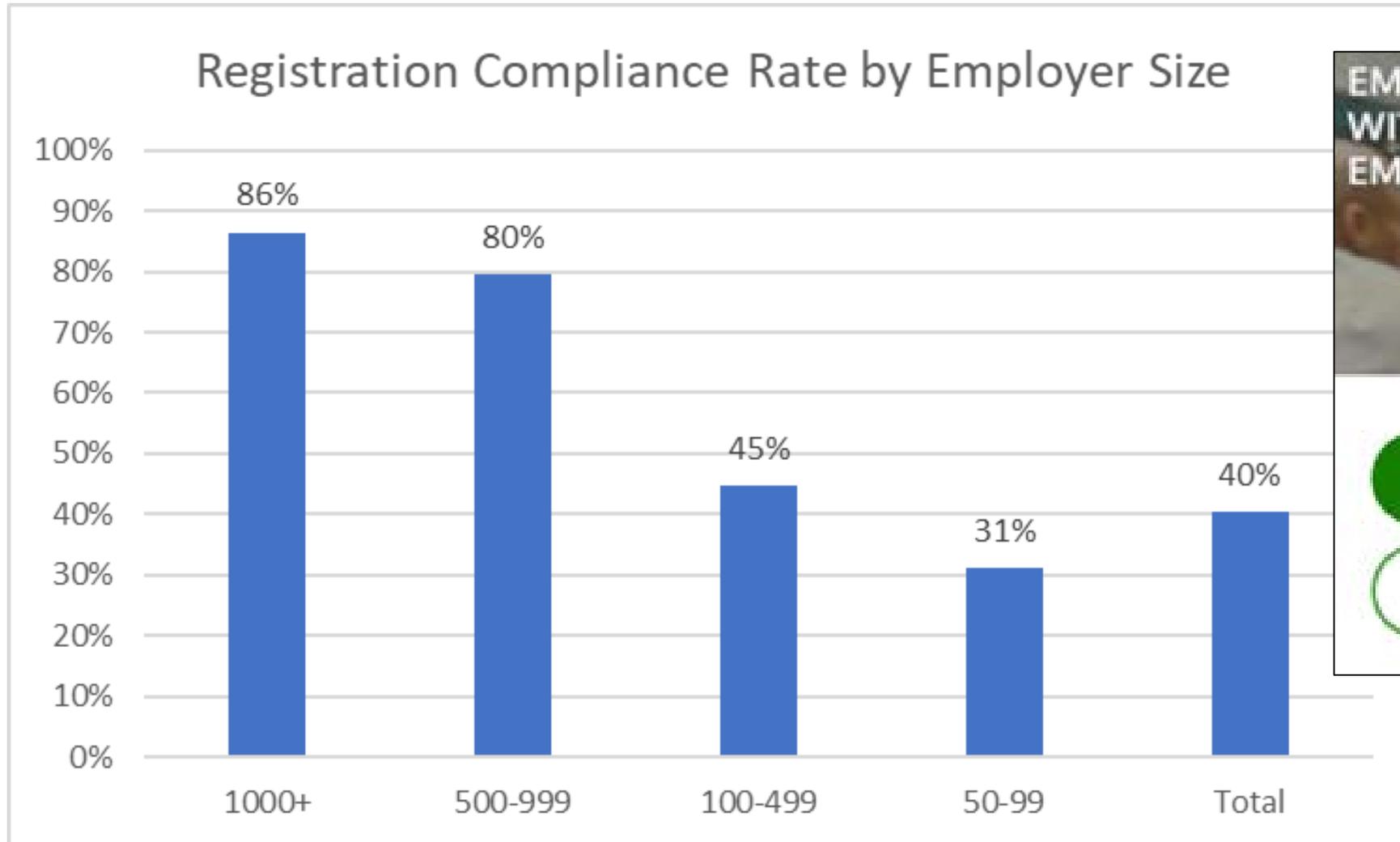
## Percent of Bay Area Employers Working From Home\*



\*Bay Area Council Survey Bay Area Employers, May 2020

Other Interior = Retail locations, factories, distribution centers  
Exterior = Construction, utility work, deliveries, etc.

# Commuter Benefit Program Compliance



**EMPLOYERS WITH 50 OR MORE EMPLOYEES**

[Register](#)

[Login](#)

# Equity in Commuter Benefits



- Equity in commuting major issue
- Reduce SOV
- Focus on transit, bicycles, carpools, walking, remote work
- Improved air quality around congested freeways improves health for residents
- Remote work reduces single occupancy driving, gridlock, and commute time for all



# Next Steps



- Stay Flexible – Upcoming Analysis and Survey Data
- Develop Program Brand Identity
- Evaluate Inequality and Remote Work
- Compliance Advisory promoting Remote Work
- Develop draft language for Commuter Benefits Program
  - Clear definition
  - Options to provide flexibility
- Engage Employer and Employer Organizations to Develop Model Program of Options
- Develop Informational Roadshow



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

**AGENDA: 16**

# **Overview of Governor's Executive Order**

**Board of Directors Meeting  
October 7, 2020**

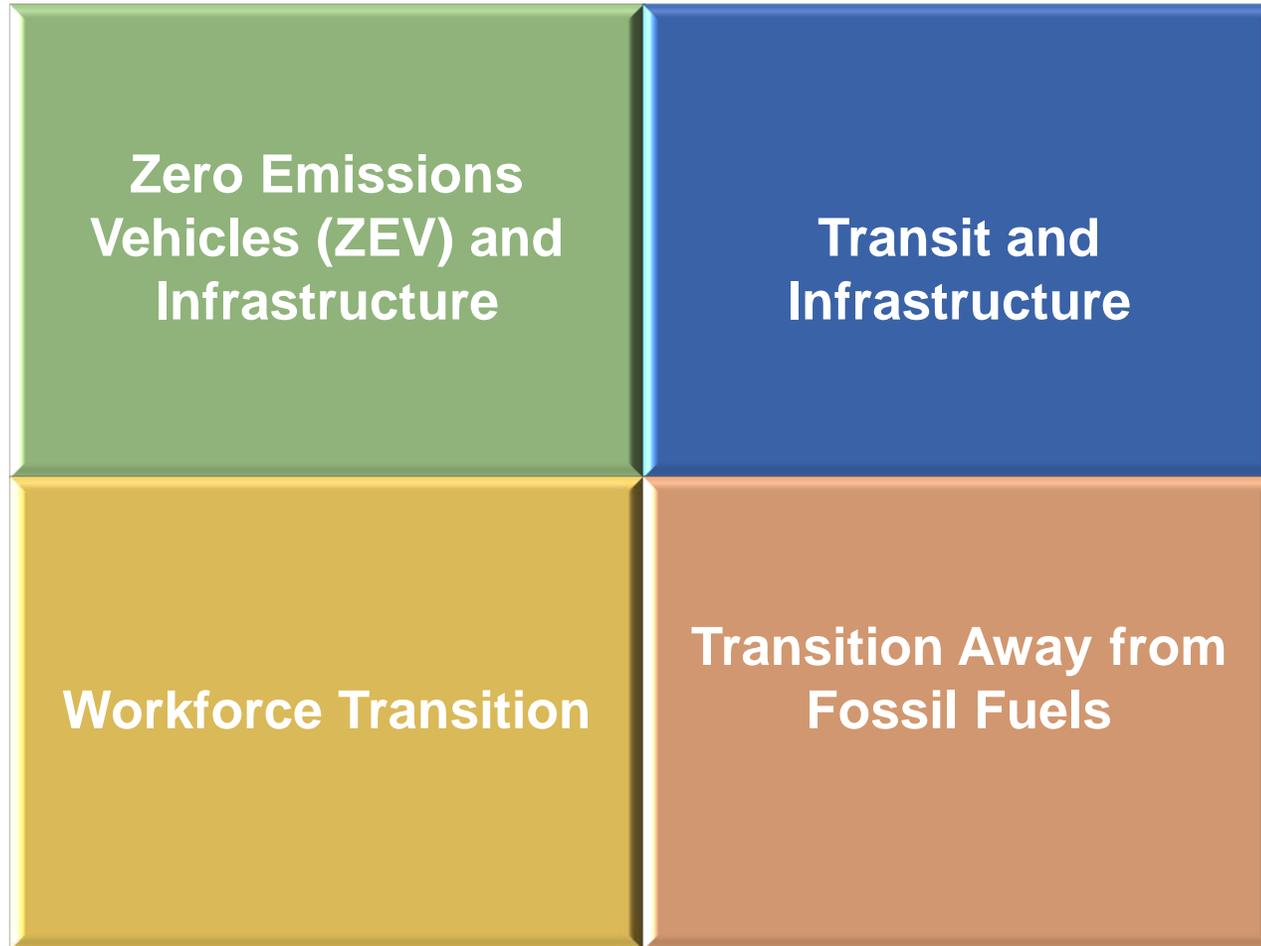
**Damian Breen, Deputy Air Pollution Control Officer  
Technology**

# Overview



- Governor's Executive Order N-79-20 Highlights
- Intersection with Air District Programs
- Market and Technology Status
- Challenges and Opportunities

# Executive Order Highlights



# Executive Order Highlights



## Zero Emissions Vehicles (ZEV) and Infrastructure

- Passenger car and light duty truck sales will be 100% zero-emission by 2035
- Drayage trucks operations will be 100% zero-emission by 2035 where feasible
- Off-road vehicles and equipment will be 100% zero-emission by 2035 where feasible
- Medium- and Heavy-Duty truck and bus operations will be 100% zero-emission by 2045 where feasible
- California Air Resources Board (CARB) will develop rules consistent with State and Federal law, considering technological feasibility and cost effectiveness

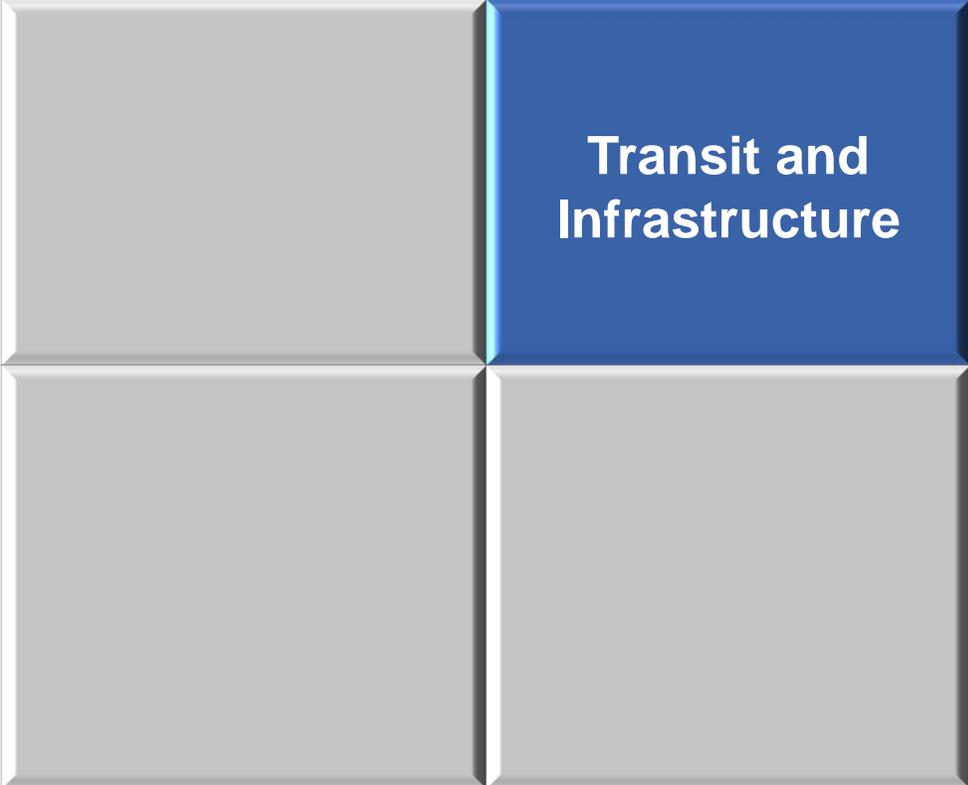
# Executive Order Highlights



## Zero Emissions Vehicles (ZEV) and Infrastructure

- Develop a ZEV Market Development Strategy by January 31, 2021
- Ensure new and used ZEVs are available to all Californians
- Accelerate deployment of affordable fueling infrastructure, focusing on low-income and disadvantaged areas
- Perform biannual assessments of infrastructure to support ZEV adoption

# Executive Order Highlights



## Transit and Infrastructure

- Where feasible, build towards an integrated statewide rail and transit network to provide seamless and multimodal transportation for all, including:
  - Bicycle, Pedestrian, and Micro transit improvements
  - Focus on disadvantaged communities
- Consider ZEV and other infrastructure as part of building projects where appropriate

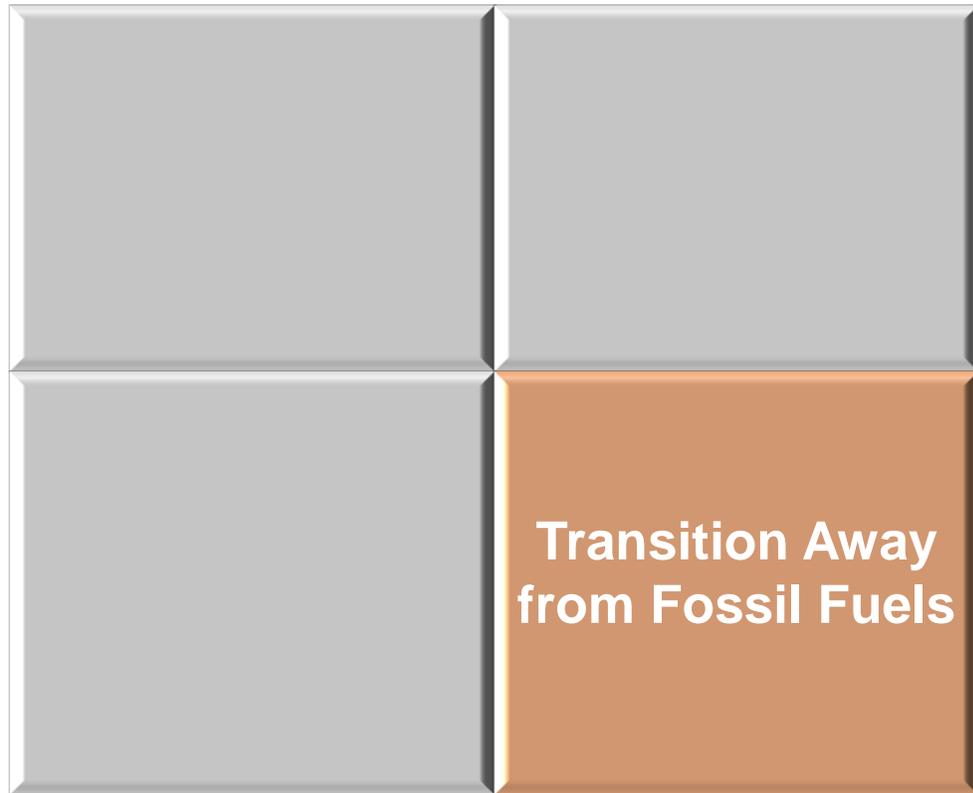
# Executive Order Highlights



**Workforce  
Transition**

- Develop a “Just Transition Roadmap” by July 15, 2021, which will focus on a transition away from fossil fuels to achieve carbon neutrality by 2045

# Executive Order Highlights



- Expedite regulations to repurpose and transition upstream and downstream oil production facilities
- As part of regulatory action, take into consideration community and labor participation, and protect public health, safety and the environment
- Develop an action plan by July 15, 2021
- CARB to propose strategies to continue to reduce carbon intensity of fuels beyond 2030

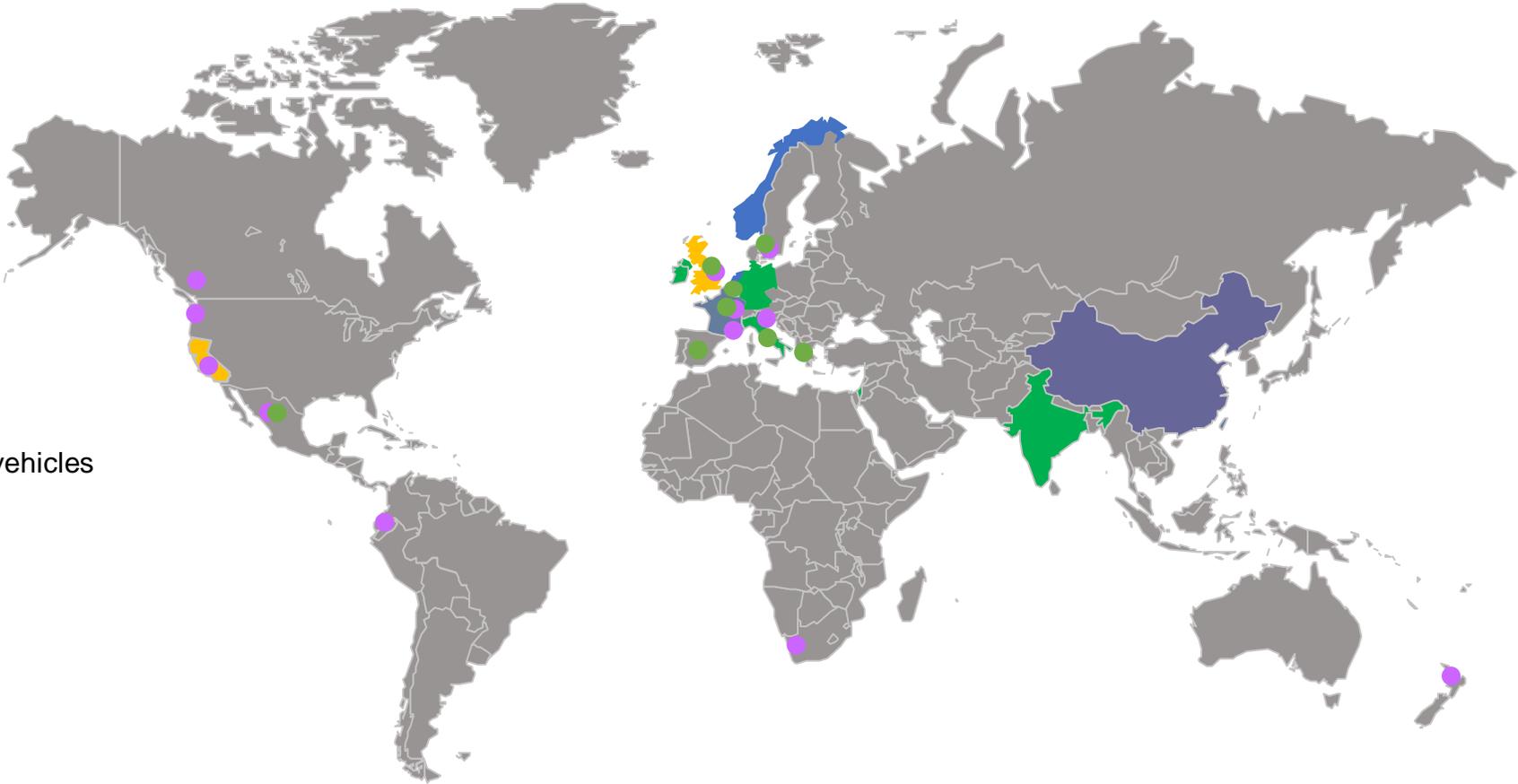
# Executive Order Highlights



**Transition Away  
from Fossil Fuels**

- Develop strategies to remediate and expedite closure of oil extraction sites by July 15, 2021
- Enforce requirements, so oil extractors are responsible for site clean up
- Propose strengthened health and safety rules that protect the public and workers from the impacts of oil extraction activities

# Other Commitments Worldwide



**Legend:**

- Country/regional, ban sales of gasoline/diesel vehicles
  - By 2025
  - By 2030
  - By 2040
  - TBD
- Country/regional, all zero emission vehicles
  - By 2050
- State, reduce petroleum consumption by 50%
  - By 2030
- City, diesel vehicle ban
  - 2018-2025
- C40 cities with pledges for zero emissions
  - By 2030

# Intersection with Air District Programs

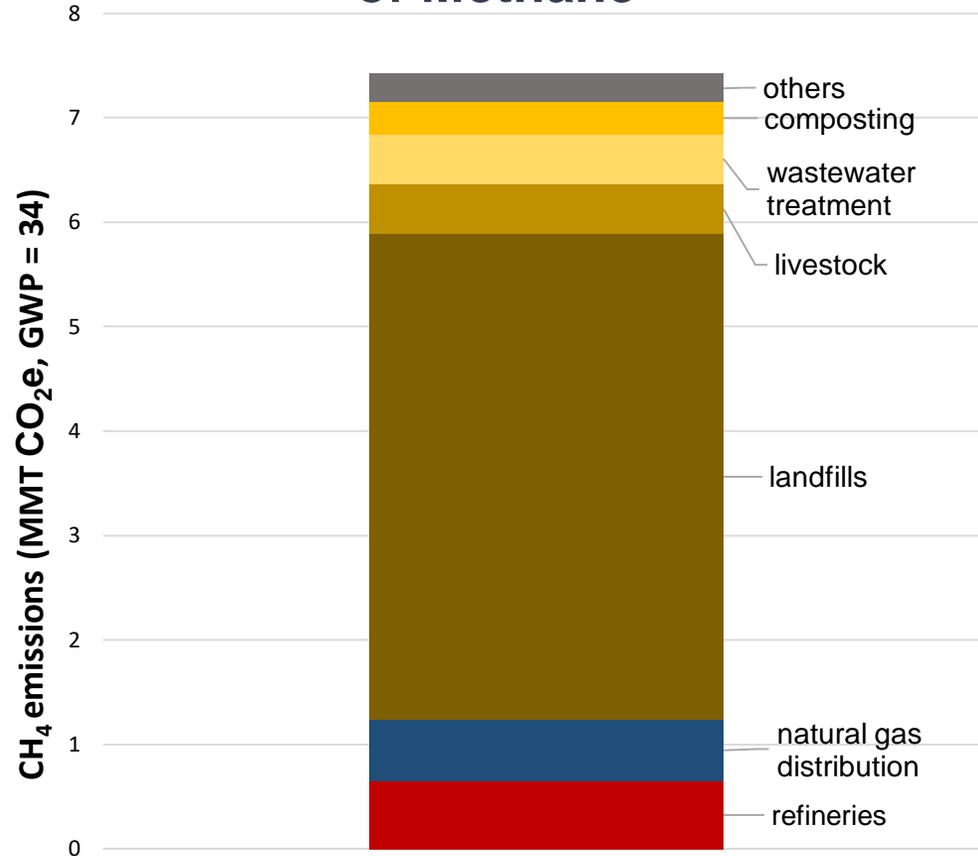


- Climate Strategy
- Equity and Assembly Bill (AB) 617 Programs
- Grants and Incentives
- Technology Implementation Office
- Permitting and Enforcement
- Strategic Partnerships

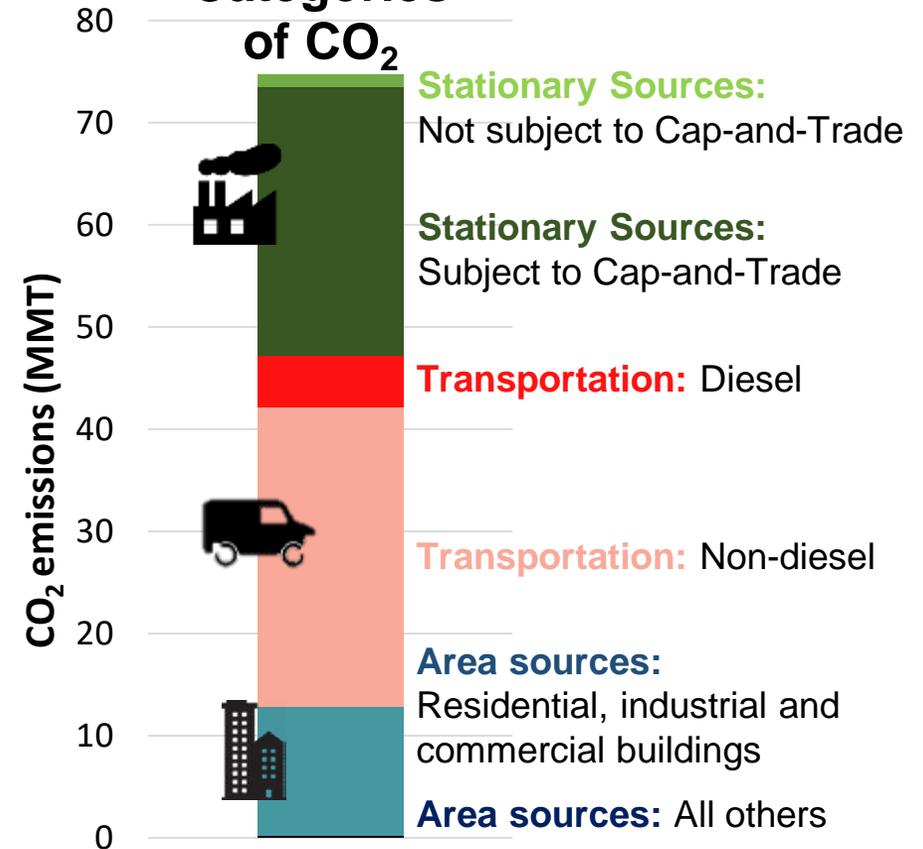
# Climate Strategy Bay Area GHG Emissions



## Major Source Categories of Methane



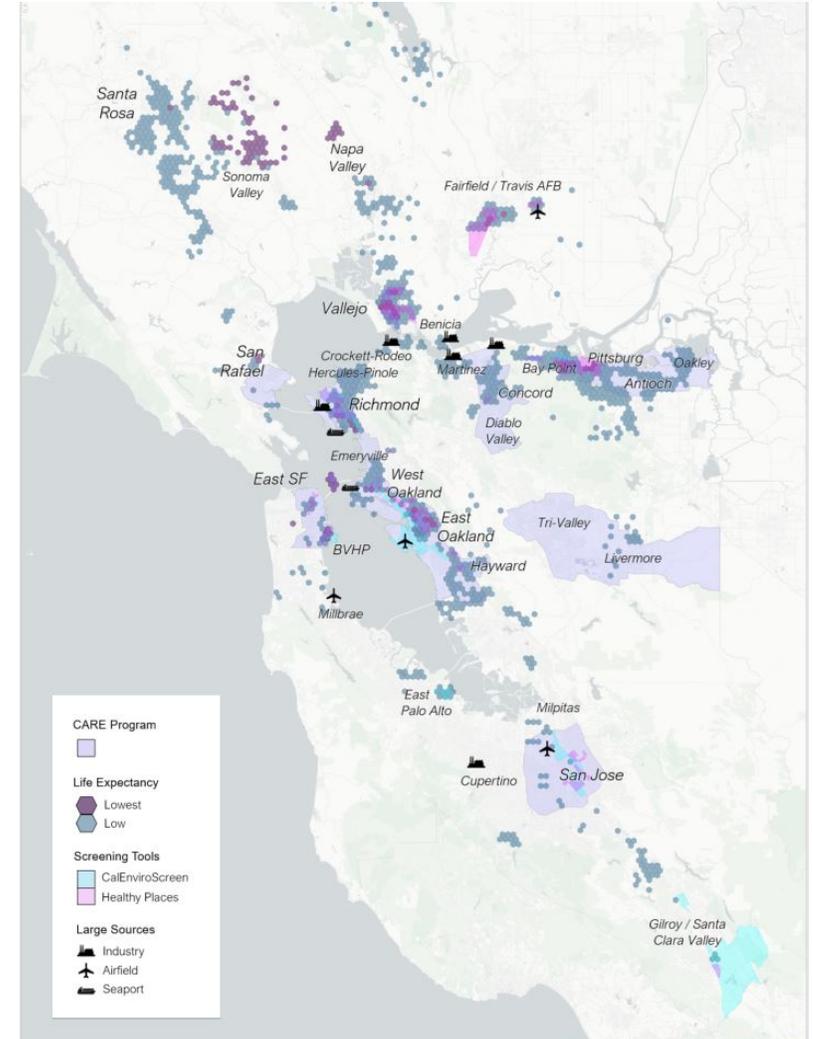
## Major Source Categories of CO<sub>2</sub>



# Equity & AB 617 Programs



- Disproportionate health impacts along transportation corridors and near high emission sources
- Diesel PM is a contributing factor to health impacts in every community
- Mobile sources account for 45 percent of exposure disparity for the Black populations, and 37 percent of exposure disparity for people in disadvantaged communities
- West Oakland Community Emissions Reductions Plan identifies suite of strategies to deploy ZEVs
- AB 617 Grant funds currently targeted at Diesel PM reductions



# Grants & Incentives



# Grants & Incentives – Clean Cars for All



Low-income residents\* in communities disproportionately burdened by pollution\*\* who turn in older vehicle



## Advanced Technology

- Purchase or lease
- Hybrid, plug-in hybrid, electric vehicle, fuel cell electric vehicle
- Home charger or portable charger & public charging for plug-in and electric vehicles



## Mobility Options

- Public Transit Card (PEX Visa)
  - Clipper, bike sharing
- Electric bicycles and carsharing (future options)

\* ≤400% Federal Poverty Level

\*\* CalEnviroScreen 3.0

# Technology Implementation Office



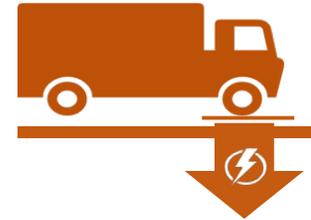
4,000 residential battery systems



150 renewable microgrids on municipal buildings



100 battery-boosted EV fast chargers



60 road plates generating electricity



10 all-hydrogen fuel cell ferries



2,600,000 tons of aggregate in concrete

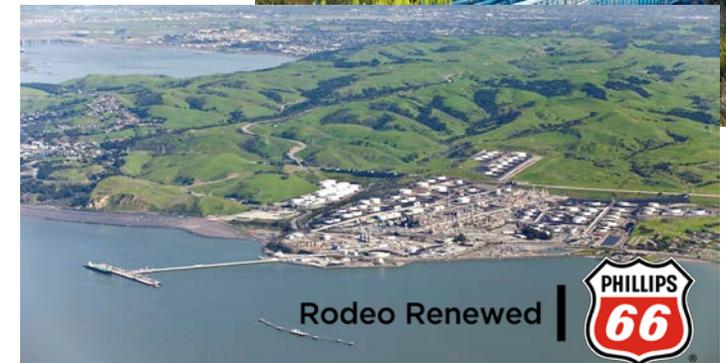
**Total Greenhouse Gas Reductions**

**500,000 MTCO<sub>2</sub>**

# Permitting & Enforcement



- Off Road Equipment?
- Changes to Oil Production Facilities
- Changes to Petroleum Refineries
- Enforcement of ARB Regulations



# Strategic Partnerships



- State Agencies
- Regional Partners
- Transit Agencies
- Communities
- Industry Groups



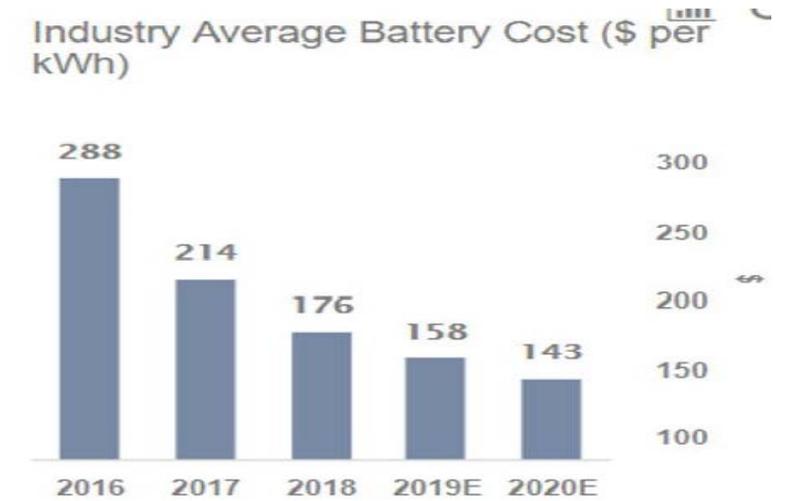
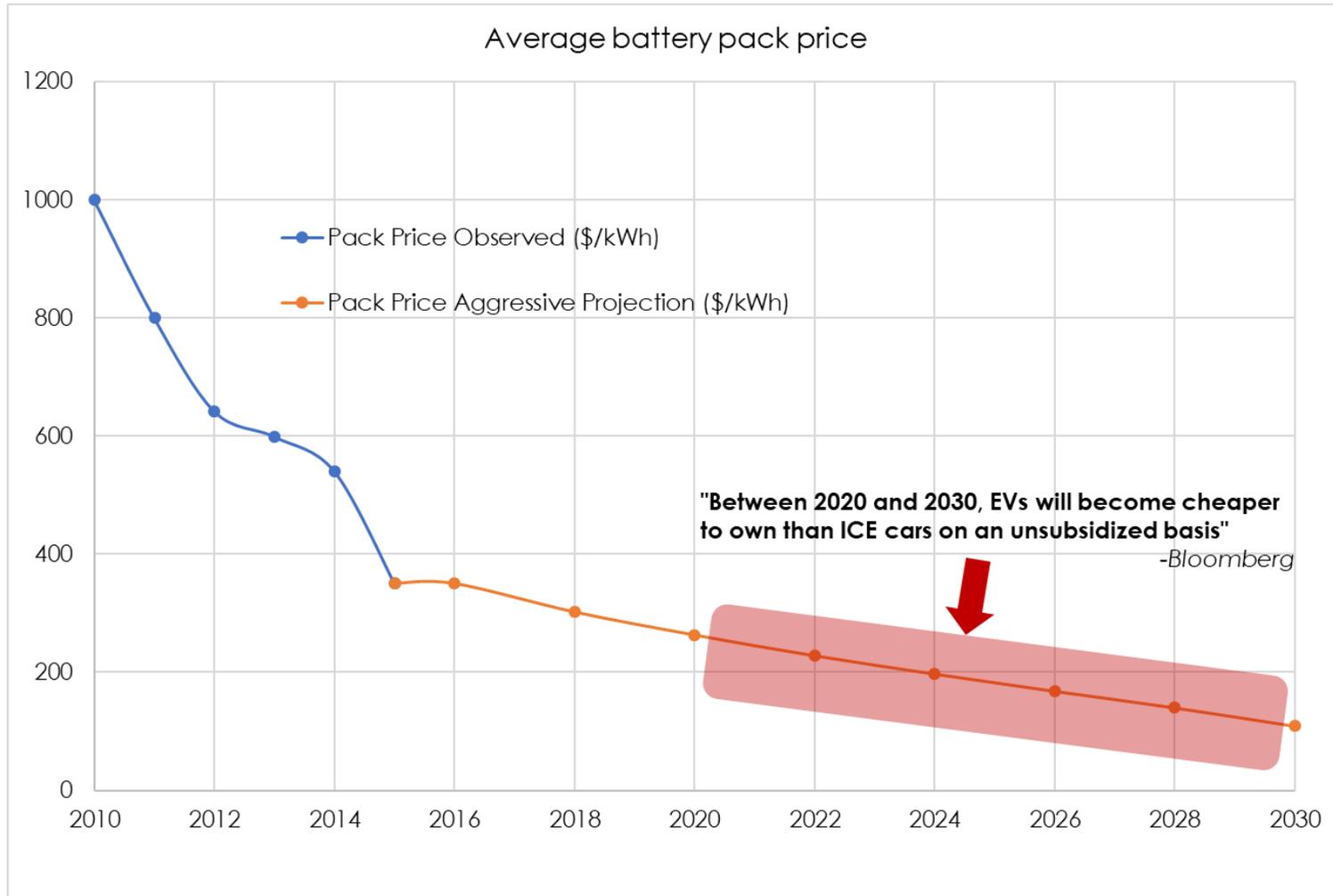
# Market & Technology Status Regulations



- Airport Shuttles – 100% ZEV by 2035
- Trucks – ZEV sales by 2035:
  - 55% of Class 2b – 3, 75% of Class 4 – 8, and 40% of tractors
- Shorepower – Ocean Going Vessels at Berth
  - Container, reefer and cruise vessels: 2023, Auto carrier: 2025; Tanker vessels: 2025 (Los Angeles and Long Beach) and 2027 (Northern California)
- Transit buses – 100% new purchases ZEV by 2029
- Passenger Cars and Light Duty Trucks – ZEV “Credits” – 8% of Sales by 2025

# Market & Technology Status

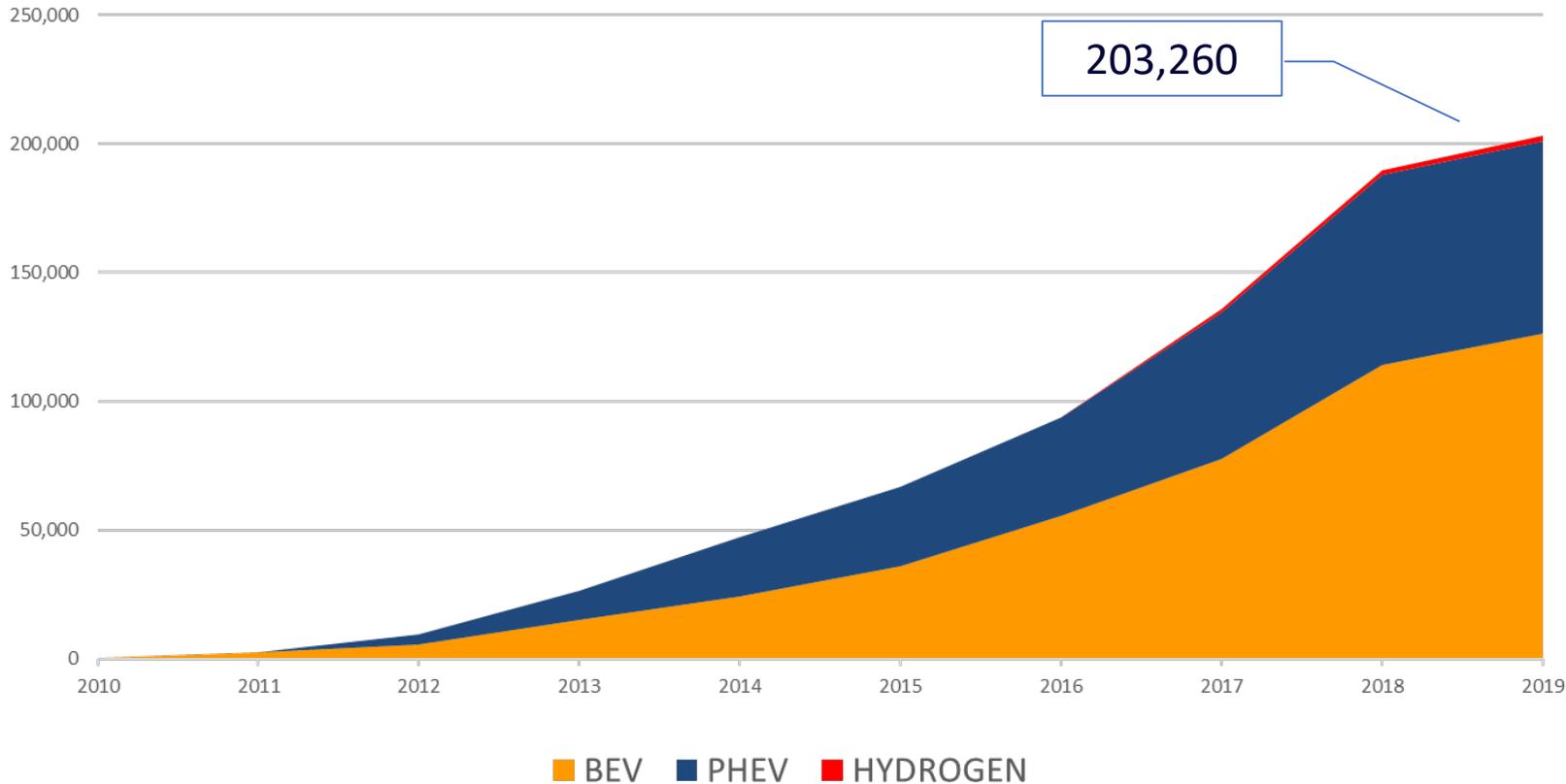
## Battery Costs



# Market & Technology Status Light Duty Vehicles



Number of EVs Registered in Bay Area by Year (Cumulative)



**2019 Bay Area Vehicle Statistics**



**EVs**  
203,260



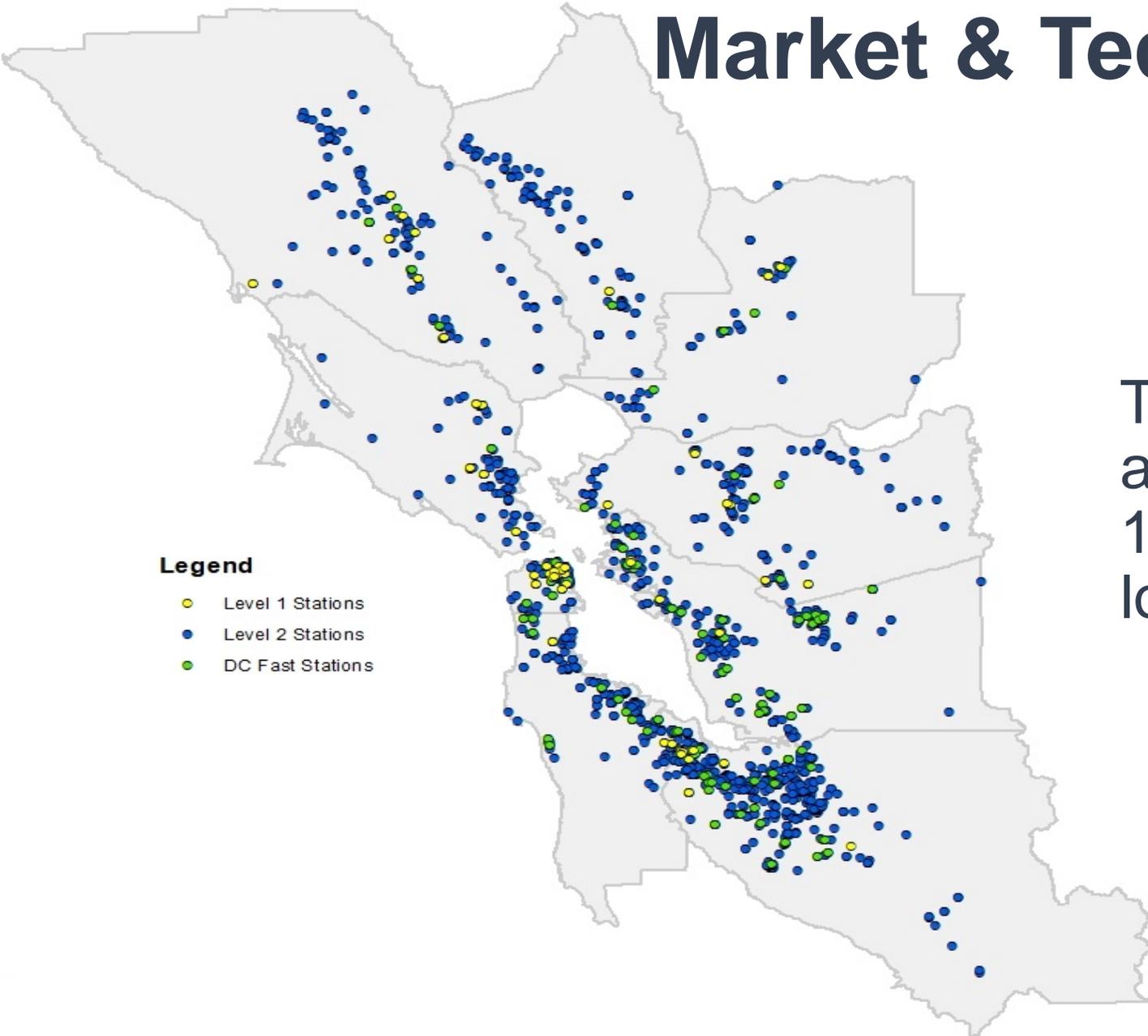
**All Cars**  
5,465,494

# Market & Technology Status Regulations



## Legend

- Level 1 Stations
- Level 2 Stations
- DC Fast Stations



The 9,500 public charging ports are located across a total of 1,923 charging station locations.

# Market & Technology Status Trucks and Buses



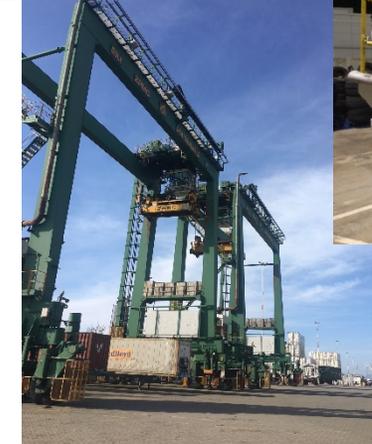
- Four (4) largest Truck Manufacturers in USA bringing ZEV to market in 2022 timeframe
- Both Battery and Hydrogen Drive trains being explored
- 149 different vehicle types eligible for State Heavy Duty Voucher
- Commitments by delivery companies to go “carbon neutral”



# Market & Technology Status Off-road Vehicles and Equipment



- Most challenging
  - Construction and grading
  - Cargo handling
  - Agriculture
  - Backup Power?
  - Water Pumps?
  - Rail?
  - Aviation?
- New Technologies emerging but significantly more work needed





**Light-Duty  
Cars &  
Fueling  
Stations**

**Shared &  
Connected  
Vehicles**

**On-Road  
Trucks and  
Buses**

**Off-Road &  
Rail**

**Shore Power**

**Wood Smoke**

**>1,600 cars  
>5,000  
charging  
stations**

**Bike Sharing  
Car Sharing  
Shared  
autonomous  
vehicles**

**>300 Medium  
& Heavy-Duty  
Vehicles**

**~160 cargo  
handling & airport  
ground support  
equipment  
Caltrain  
>250 Lawn &  
Garden**

**14 Berths at  
Port of  
Oakland**

**>50  
residential  
electric heat  
pumps**

# Challenges and Opportunities



## Challenges

- California's Legal Standing
- Cost - \$15 to \$30 billion over next five (5) years
- Grid and Power Issues

## Opportunities

- Technology Coming into Market Quickly
- Green Jobs and Economy
- Possibility of Federal stimulus