

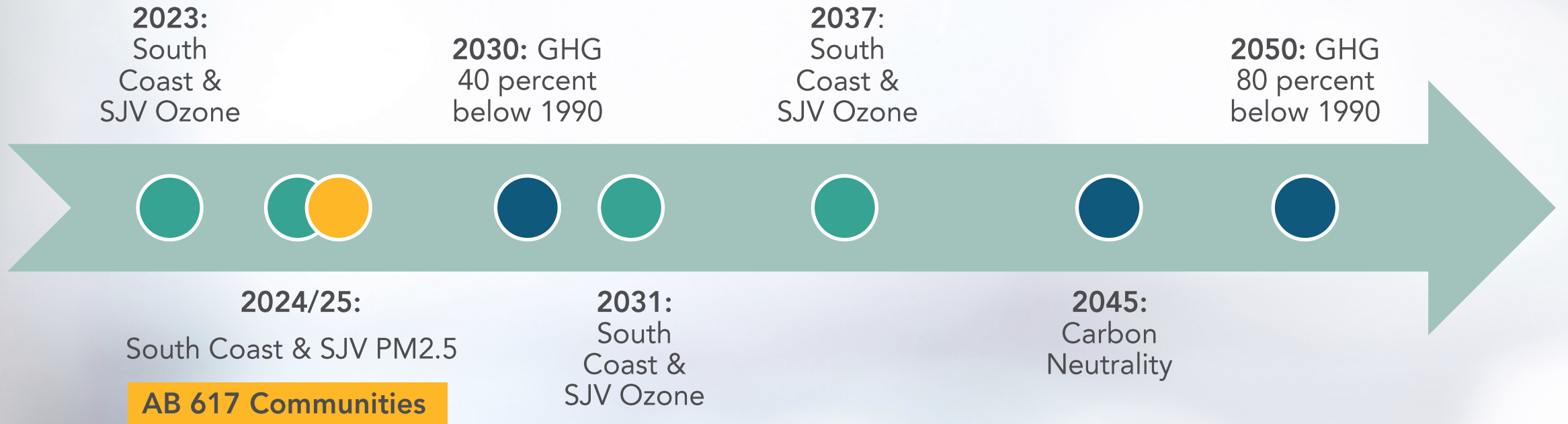


Vision for Zero Emission Transportation

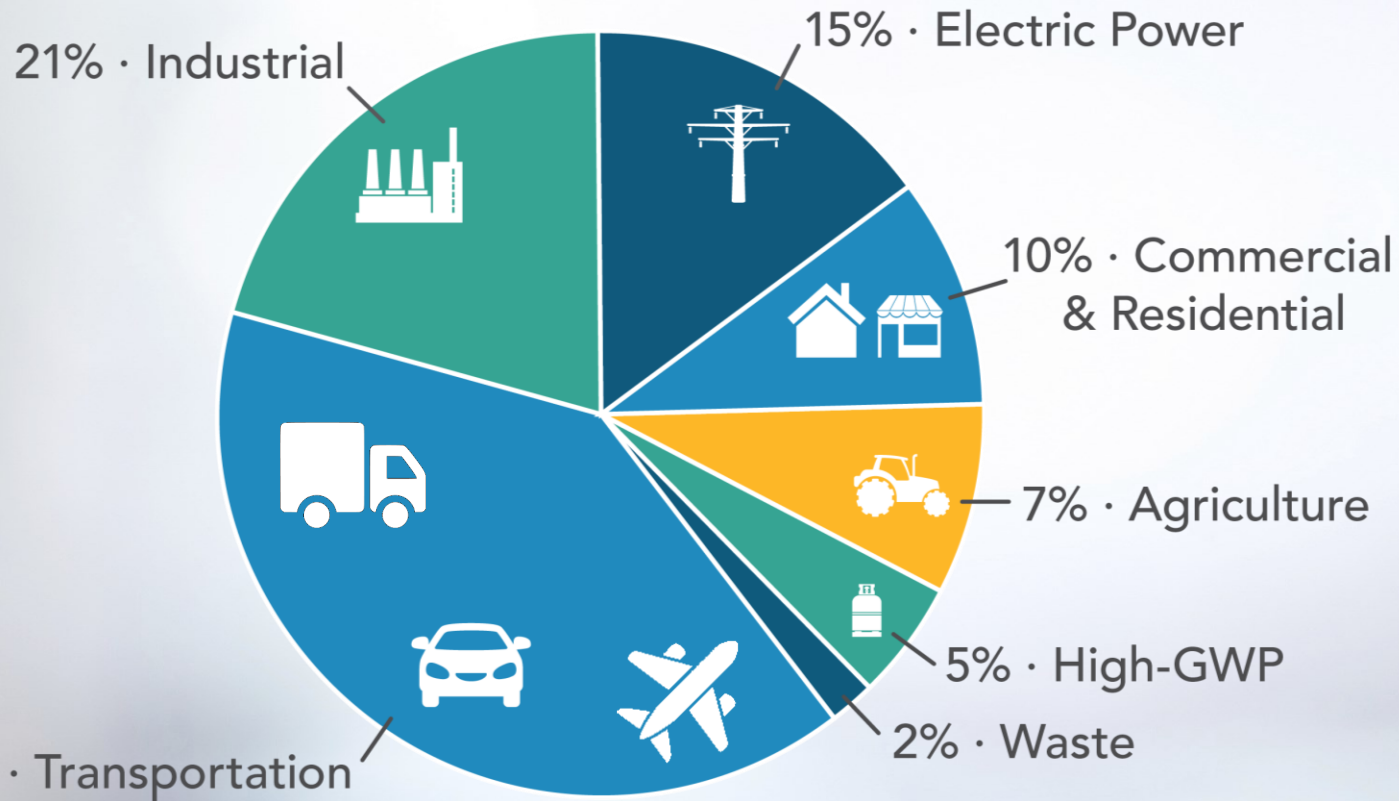
Public Workshop Series to Commence
Development of the 2022 Scoping Plan Update

June 10, 2021

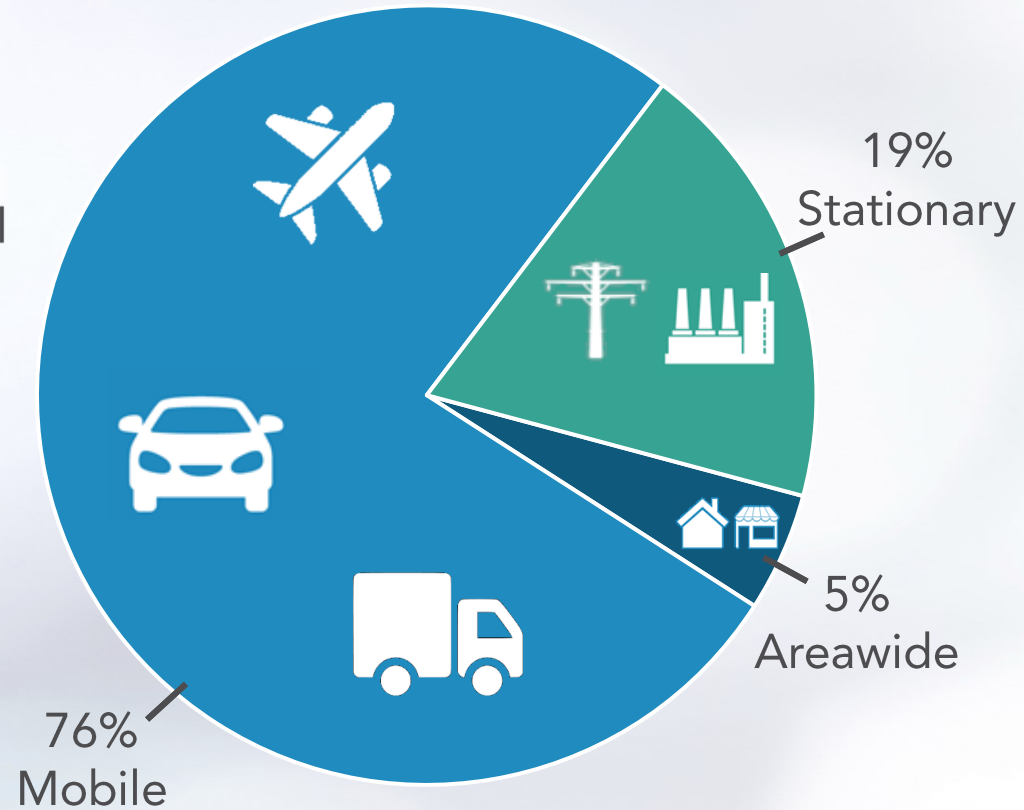
Clean Air Goals



California Mobile Source Contribution



425.3 MMT CO₂e
2018 TOTAL CA EMISSIONS



1,110 tpd of NO_x
2020 CA NO_x Emissions

Executive Order N-79-20

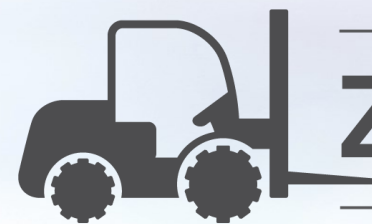


100% ZEV sales by 2035

Full transition to
ZEV short-haul/drayage trucks
by 2035



Full transition to **ZEV buses & heavy-duty long-haul trucks**
by 2045*

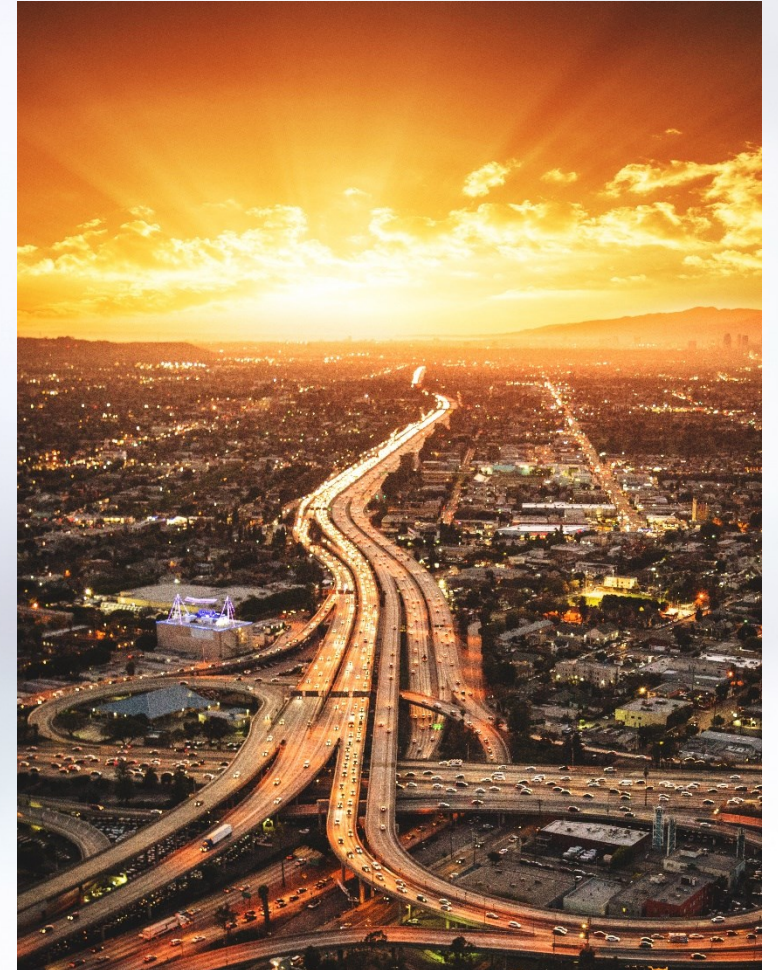


Full transition to
ZE off-road equipment
by 2035*

*where feasible

2020 Mobile Source Strategy

- Builds on 2016 Mobile Source Strategy
- Conceptual scenario approach
- Identifies technology mixes needed to meet toxics, air quality and climate targets
- Reflects Governor's recent ZEV EO
- Informs policy development



Community Focus

- Low-income communities and people of color are disproportionately affected by both mobile and stationary source pollution
- Communities seek rapid transition to zero-emissions technology in and near communities



Technology Mixes in a Nutshell



Passenger Vehicles: 100% ZEV and PHEV sales in 2035, along with ~25% reduction in statewide VMT per capita by 2035 relative to 2005



Heavy Duty Vehicles: 100% CA fleet purchases being ZEV starting in 2035 combined with cleaner combustion (Omnibus, HD I/M, EPA CTI) in near term

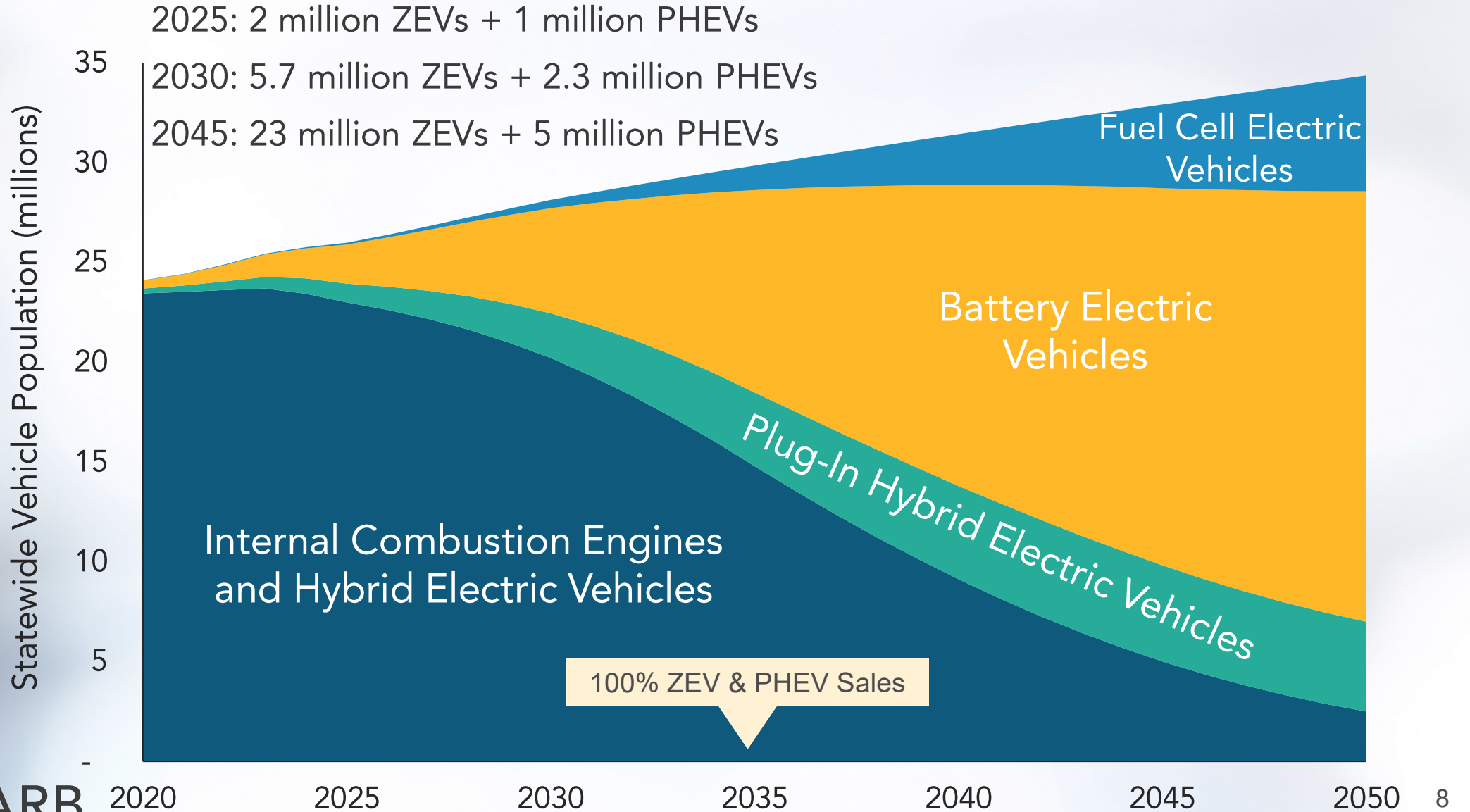


Smaller Off-Road (e.g., forklifts, TRU, SORE): Full transition to zero-emission by 2035 for most off-road sectors with smaller engines.

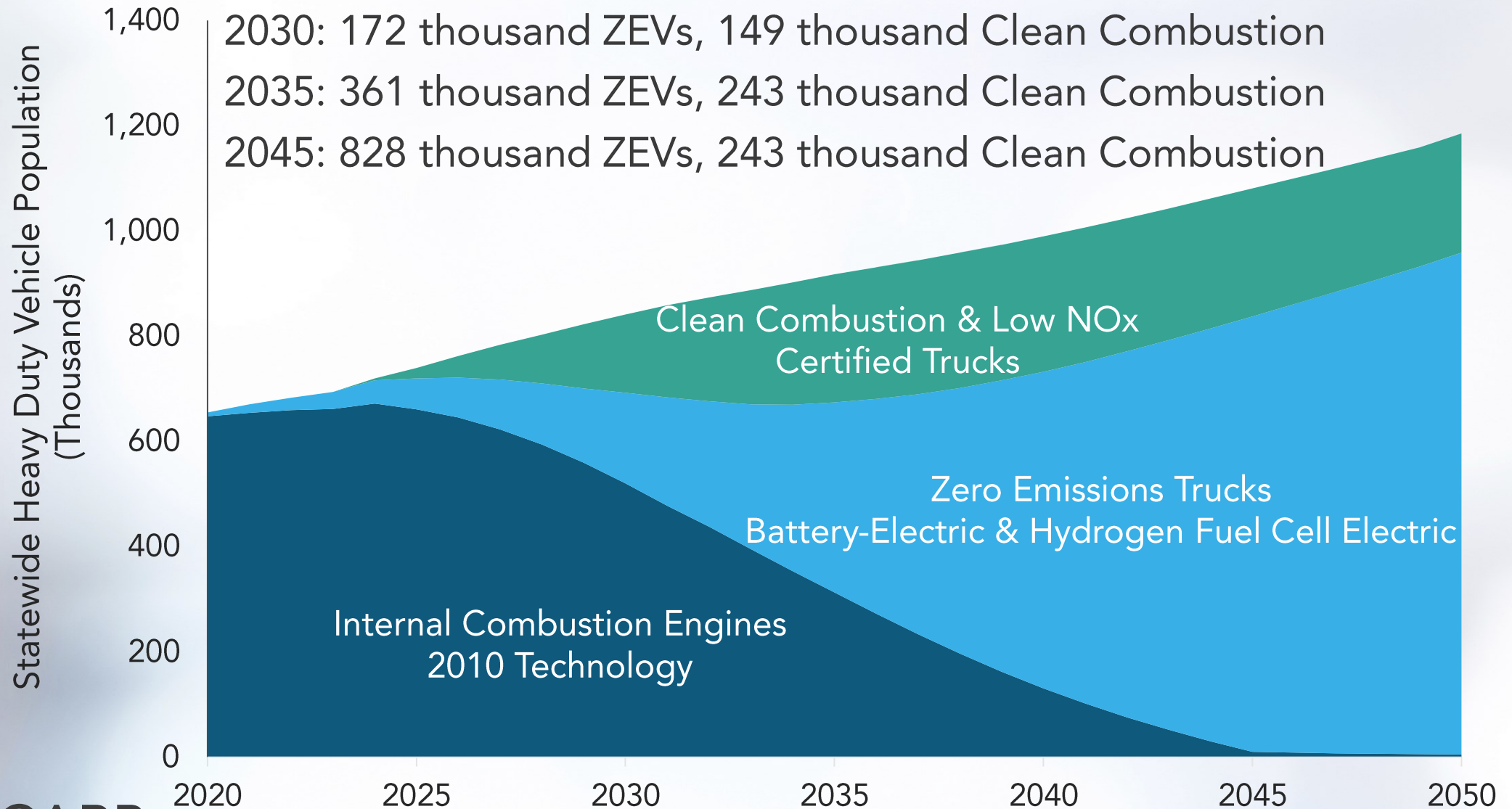


Heavier Off-Road (e.g., marine, construction, locomotive): Zero-emission wherever feasible, and cleaner combustion engines along with low-carbon fuels in hard-to-electrify sectors

California's Clean Car Future



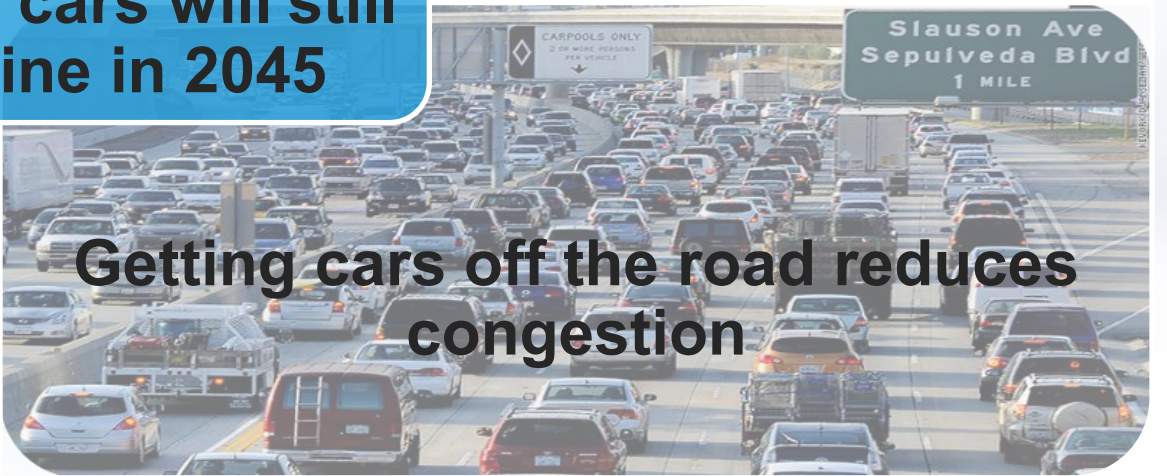
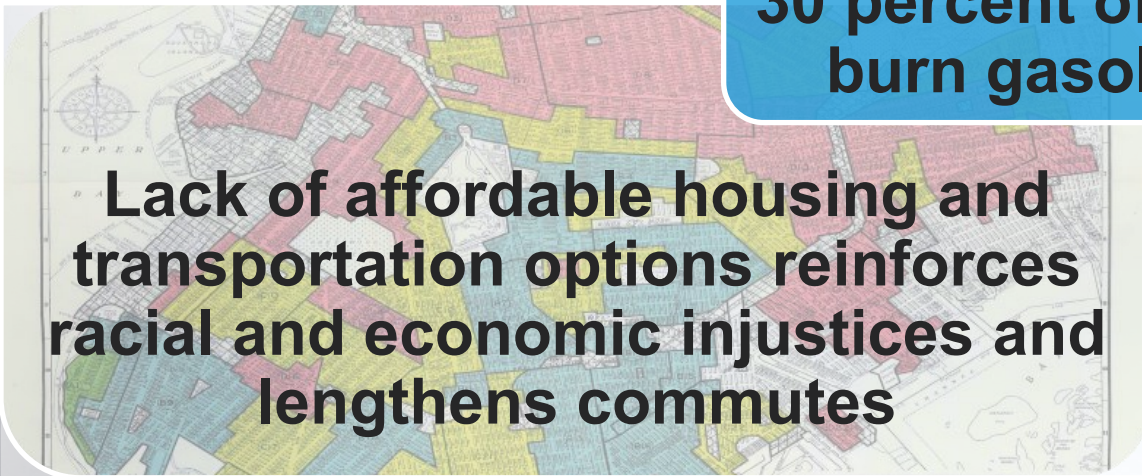
Future of California's Heavy Duty Trucks



Beyond ZEVs: The Need to Reduce VMT



Even under EO N-79-20, 30 percent of cars will still burn gasoline in 2045



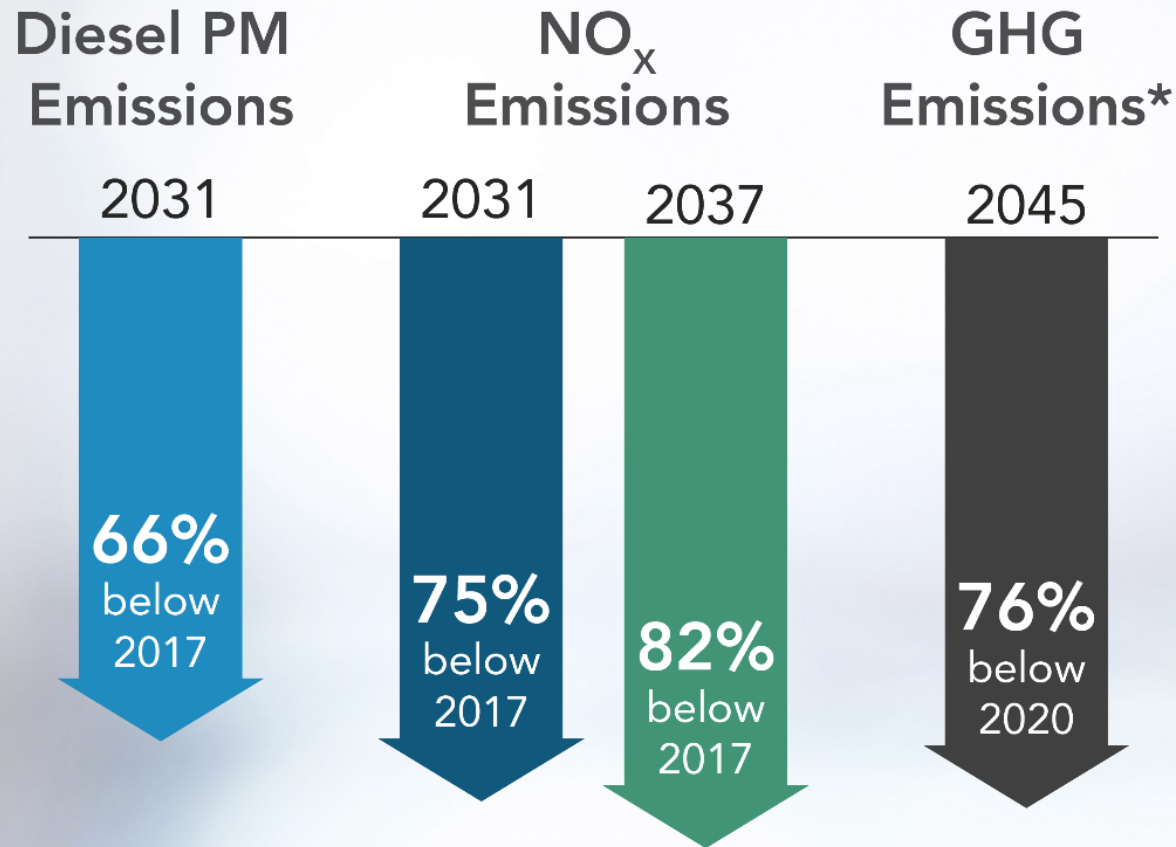
Need for Zero-Emission Infrastructure Planning

- A reliable infrastructure system is essential for zero emission technologies to achieve widespread growth
- Infrastructure needs, charging standards/connections, and power capacity needs vary widely, and are under various stages of development by source category
- Collaborate and engage facilities, utilities, and other agencies in zero-emission planning discussions



Potential Statewide Benefits

2020 Mobile Source Strategy April 2021 Revised Draft

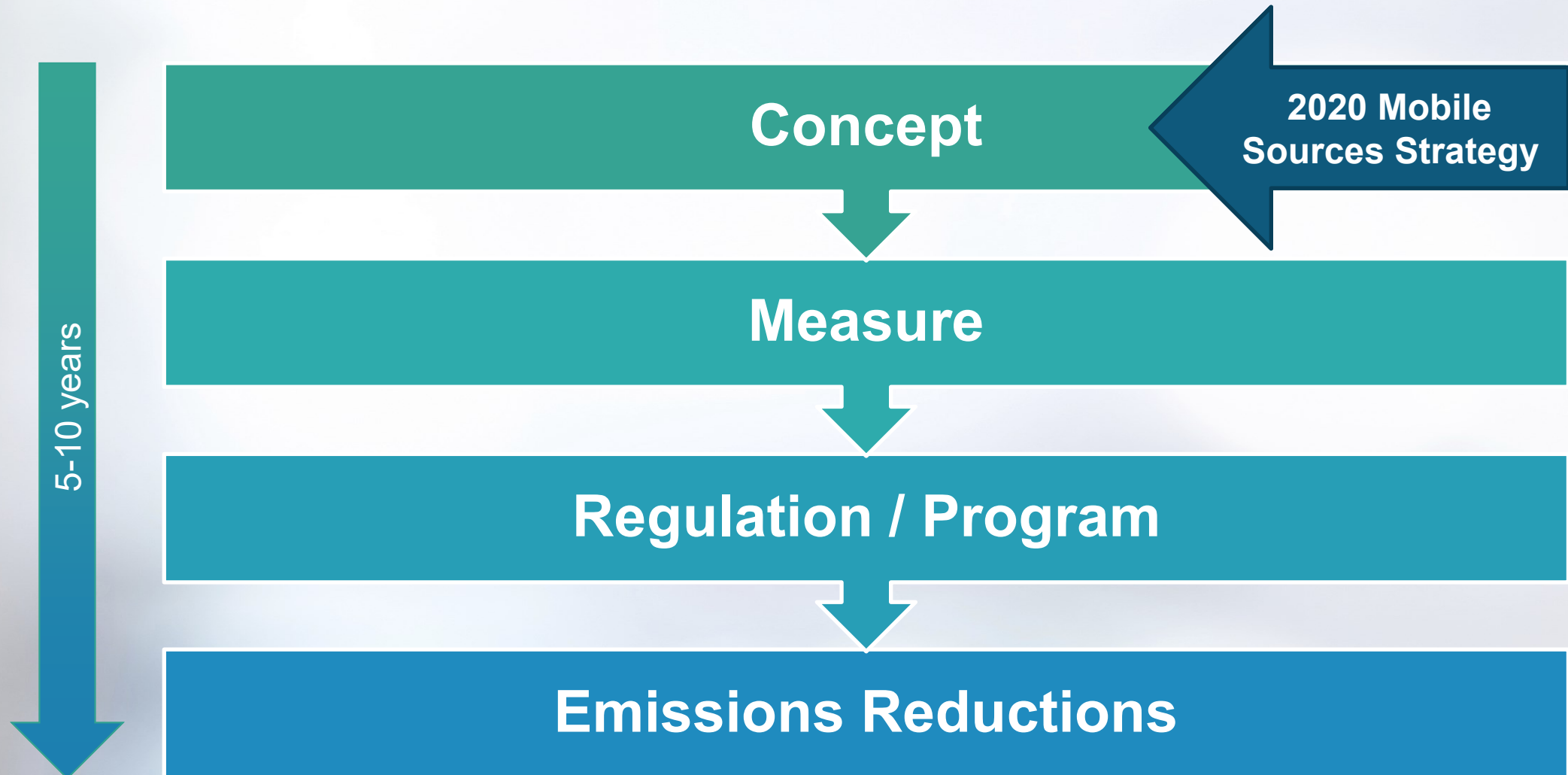


85 percent
of passenger cars
ZEV & PHEV in 2045



77 percent
of heavy-duty fleet
ZEVs in 2045

Evolution of a Concept



We have ambitions for a future with



Zero emission technologies



Sustainable transportation & healthy communities



Carbon neutrality, with 100% clean electricity by 2045

Contacts and Resources

Sam Pournazeri

Chief, Mobile Source Analysis Branch
Air Quality Planning and Science Division

Sam.Pournazeri@arb.ca.gov

Resources

2020 Mobile Source Strategy: <https://ww2.arb.ca.gov/resources/documents/2020-mobile-source-strategy>

Governor's Newsom Executive Order N-79-20: <https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf>

California Greenhouse Gas Emissions Inventory: <https://ww2.arb.ca.gov/our-work/programs/ghg-inventory-program>