



# **Innovative Clean Transit Implementation and Comprehensive Review on 2023 Program Readiness**

September 22, 2022

# Public Transit is Important and Synergetic

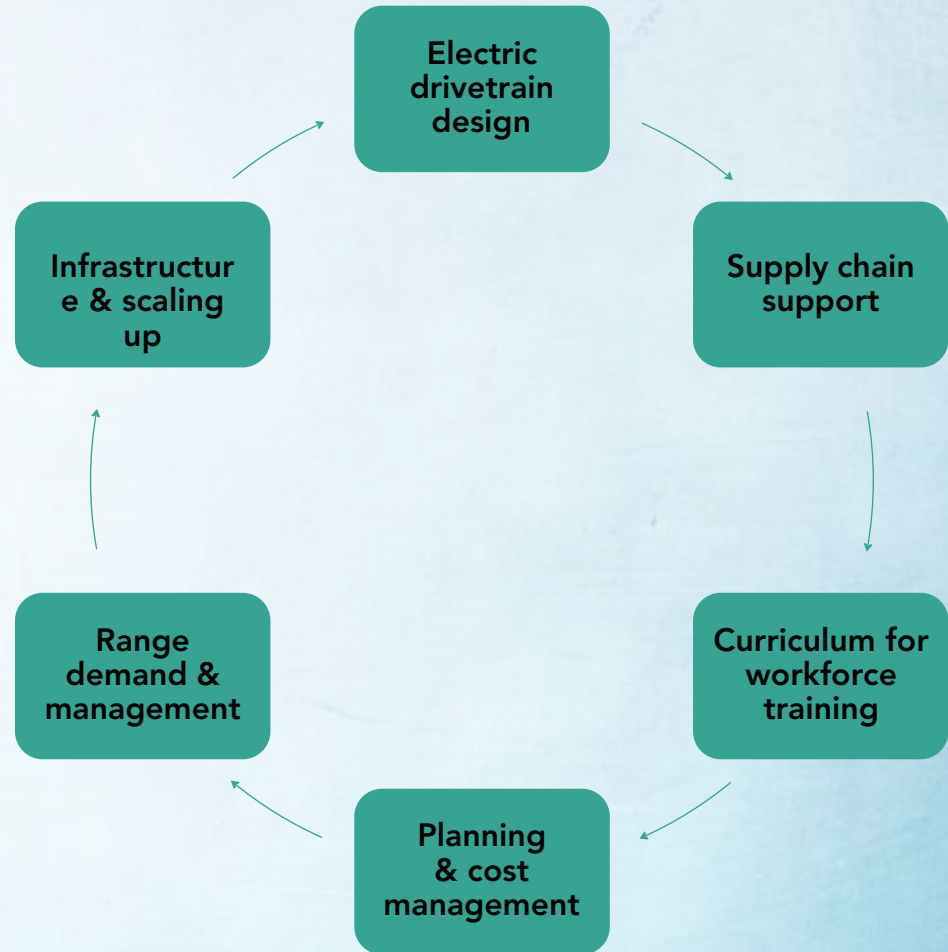


- Key for local, regional and state efforts to combat climate change
- Must meet community needs and increase ridership through:
  - Land use
  - Accessibility
  - Ease of use
  - Fare price
  - Operation and capital investments

# Benefits of Zero-Emission Buses

- Provides direct health benefits to riders and local communities
- Ensures affordable zero-emission vehicles available to all, especially low-income riders
- Creates high quality job opportunities and supports employment in disadvantaged communities
- Utilizes the most fuel-efficient technologies for public transportation
- Helps California meet climate and air quality goals

# Beachhead for Heavy-Duty Applications



# Innovative Clean Transit (ICT) Regulation

- Adopted: December 14, 2018
- Goal: Full zero-emission transition by 2040
- Major elements:
  - Early action and purchase requirements
  - Rollout plans
  - Flexibility and safeguard provisions
- Monitoring implementation:
  - Annual updates
  - One-time comprehensive review



# Zero-Emission Bus (ZEB) Purchase Schedule

- Phased-in based on fleet size
- Later for cutaway, over-the-road, double decker, and articulated buses
  - Starts on or after January 1, 2026
  - Passes testing
  - Aligns with small transits' schedule
- Early purchases count towards future compliance

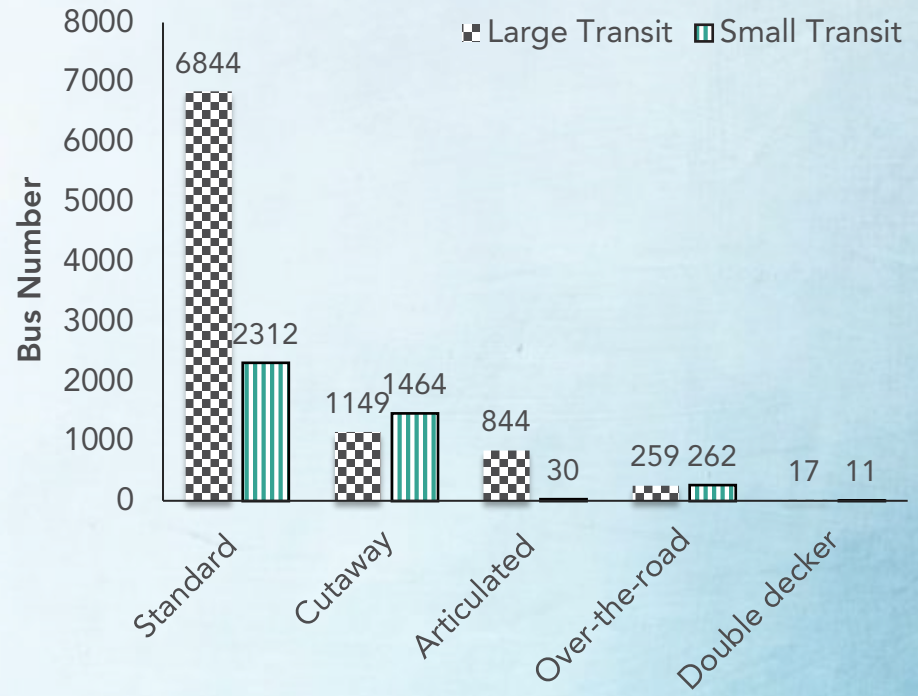
Year	ZEB Percentage of New Purchases (Large)	ZEB Percentage of New Purchases (Small)
2023	25%	-
2024	25%	-
2025	25%	-
2026	50%	25%
2027	50%	25%
2028	50%	25%
2029 & after	100%	100%

# Implementation Update

- Successful annual reporting
  - Bonus Credits: 183 (113 to large transits)
- All large transits have submitted rollout plans
- Small transit agencies working on rollout plans due June 2023
- Early action targets not met due to pandemic
- Large transit agencies ready for 2023 implementation

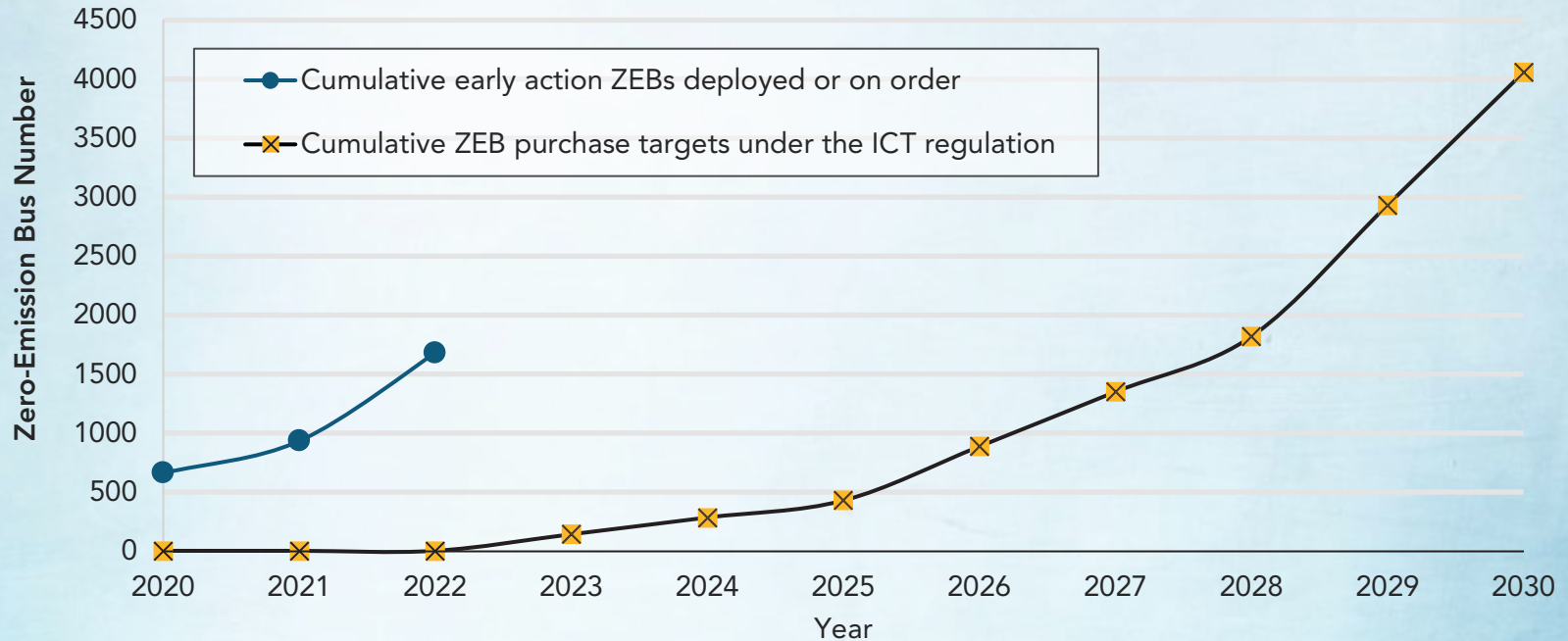
# California Transit Bus Composition

- About 200 transit agencies
  - 21 large transit agencies accounting for 70% of total buses
- Approximately 13,000 buses
  - 70% are standard buses
  - 510 ZEBs (56 FCEBs) deployed
  - 424 ZEBs (62 FCEBs) on order





# ZEB Purchases Ahead of Schedule



# Major Funding Programs for ZEB Transition



TIRCP  
Capital Improvement  
Next 3 years: \$7.65B



LCTOP  
Operations  
FY 21: \$192M

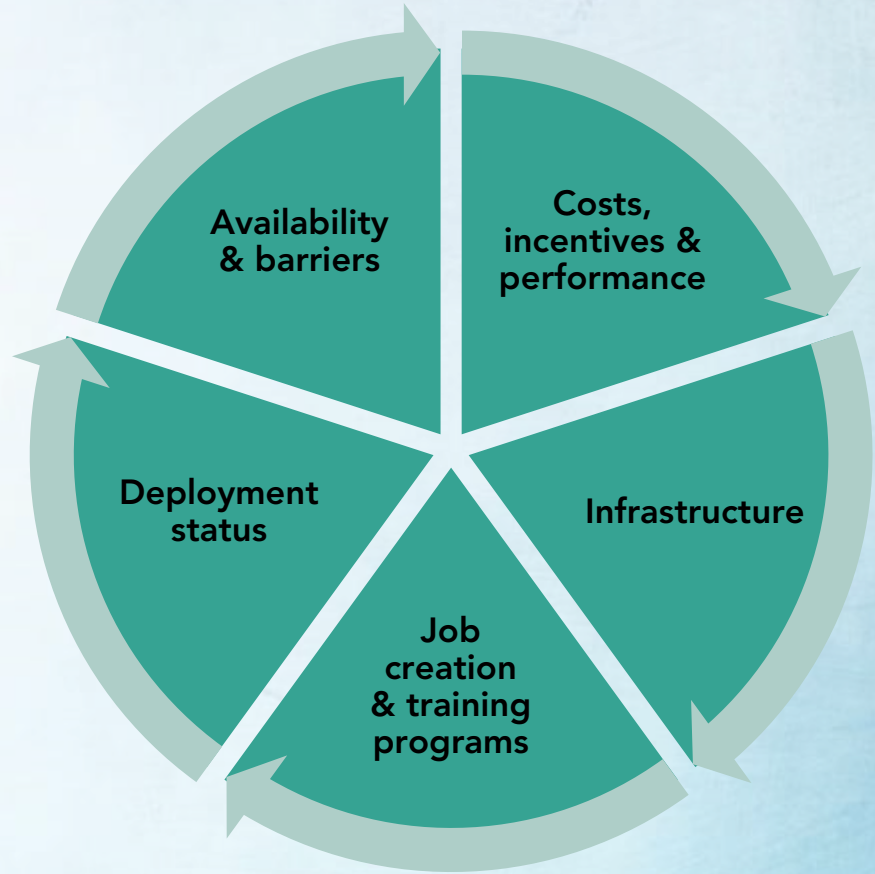


EnergIIZE  
Infrastructure  
FY 21-25: \$230M



HVIP ZEBs FY 21-25: \$520M	VW ZEBs Up to \$65M
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# Comprehensive Review of Program Readiness



# Leading the Way for the ZEV Heavy-duty Market



- Increased number of ZEB models and manufacturers
- Utilizing incentives for early action
- More electric charging and hydrogen fueling standardization
- Increased clean energy jobs

# California Large Transit Ready for 2023 ZEB Purchase Requirement

- Over a decade of demonstrations and deployments
- Product development and refinement led by the transit industry
- Collaboration among transit agencies, manufacturers, infrastructure/fuel providers
- Significant investment from the State
- Supportive environment

# California ZE Bus and Truck Manufacturing and Technologies



# Vision for Public Transit

- Clean, efficient, safe and affordable transportation for all Californians
- State agencies support the clean transition
- Market is ready for 2023 ICT implementation
- Transit agencies continue to be at the forefront with the cleanest technology, leading the way for the heavy-duty sector

