



CTC Presentation: Transitioning to Zero-Emission Trucking

August 21, 2021



Trucking Industry Overview

- Goods movement supports one-third of California's economy and jobs. 80% of goods delivered by trucks.
- "Truck Driver" is California's most common occupation
- 96% of trucking companies operate fewer than 20 trucks.
- Vast number of use cases in commercial trucking



Advanced Clean Fleets

Private and Federal

ZEV Target Phase-In Schedule

- High priority fleets and federal fleets
- Meet ZEV targets as a percent of the total fleet
- Target number of ZEVs is based on vehicle body type category
- Target number can be met by any ZEV type within category


Percentage of Fleet that Must be ZEV	10%	25%	50%	75%	100%
Box trucks, vans, two-axle buses, yard trucks	2025	2028	2031	2033	2035
Work trucks, day cab tractors, three-axle buses	2027	2030	2033	2036	2039
Sleeper cab tractors and specialty vehicles	2030	2033	2036	2039	2042

Advanced Clean Fleets

Drayage

2035 Zero-Emission Drayage Goal

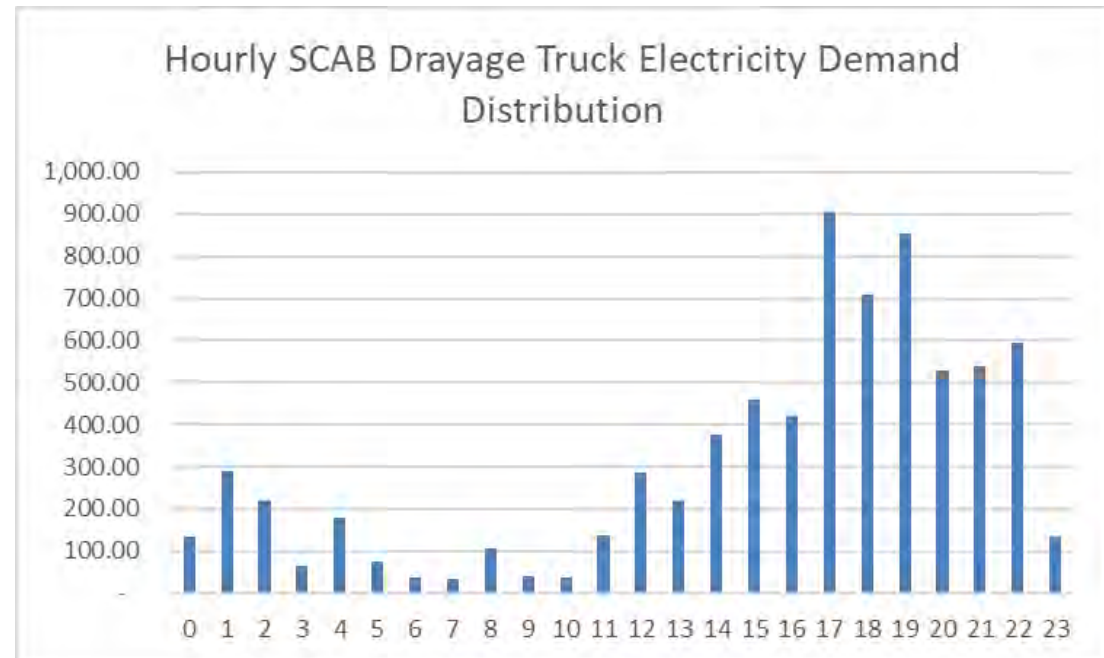
- Transition all Class 7 and 8 drayage trucks operating at California's intermodal seaports or railyards to full zero-emission by 2035



Zero Emission Drayage Trucks by 2035

Challenges & Opportunities: Considerations for a Successful ZE Transition

- **Charging infrastructure rollout**
 - CEC estimates to support 180,000 MD/HD vehicles by 2030 would require about 141,000 50 kW chargers and 16,000 350 kW. An hour charge on a 350kW capacity charger provides approx. 150-175 miles of range.
 - Context: Avg monthly household electricity use is 557kWh. That is 1.6hrs of operation of a 350 kW charger.
 - Typical retail diesel station has 10-20 pumps (3.5-7MW). Equals an 800-1600 station buildout.
 - POLA/POLB fleet alone could generate peak demand of nearly a GW.
 - Must have targeted, strategic approach for efficient use of public & private investment



Challenges & Opportunities: Considerations for a Successful ZE Transition

- **Identify “best use cases” and accelerate them with robust public incentives**
 - **Primary barriers are: Cost, Weight, Range, Infrastructure**
 - **Generally, Class 6 and below in return to base operation with 8-10hr downtimes will be earliest to transition**
 - **Fewer weight/range issues, lower capacity chargers, less demand on grid**



Thank You!

Chris Shimoda, VP of Government Affairs

California Trucking Association

cshimoda@caltrux.org