

DOCKETED	
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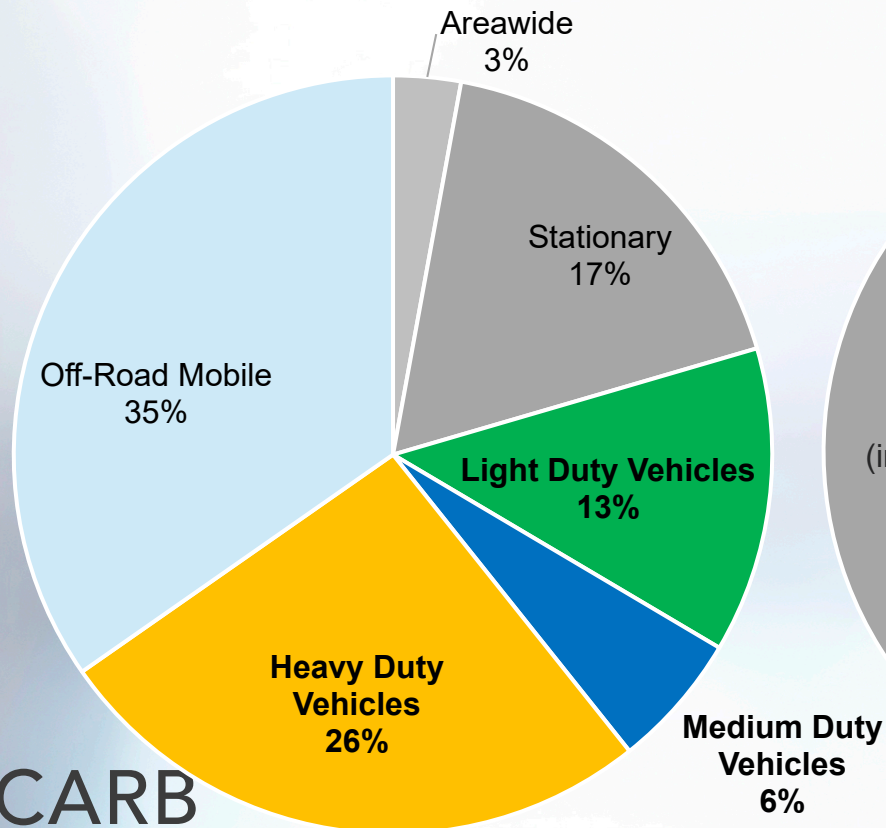
ZEV Technology Rollout for Deep Emission Reductions

Joshua Cunningham
CEC AB 2127 Workshop
August 6, 2020

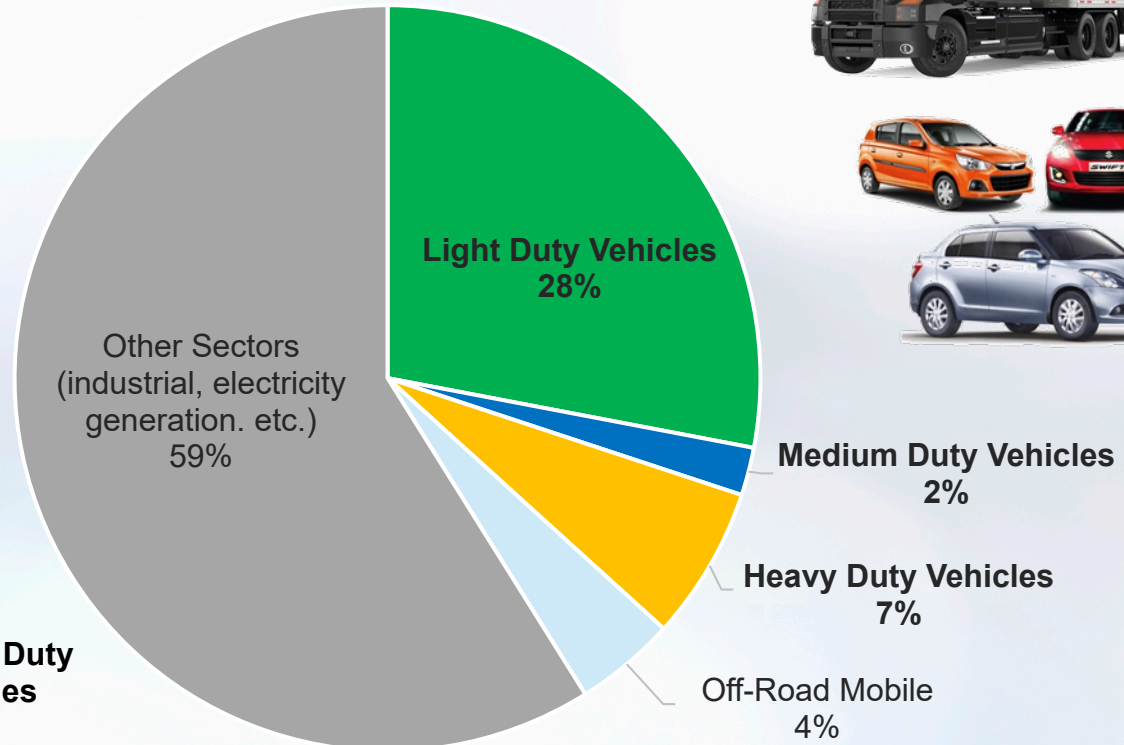
On-Road Vehicles

In 2017 on-road mobile sources contribute to 45% of statewide NOx emissions and 37% of statewide GHG emissions

Statewide NOx Emissions



Statewide GHG Emissions



Emission Reduction Targets

Criteria Emissions (NOx) ***National Ambient AQ Std:***

75 ppb ozone, attainment in
South Coast by 2031

70 ppb ozone, attainment in
South Coast by 2037

GHG Emissions ***California:***

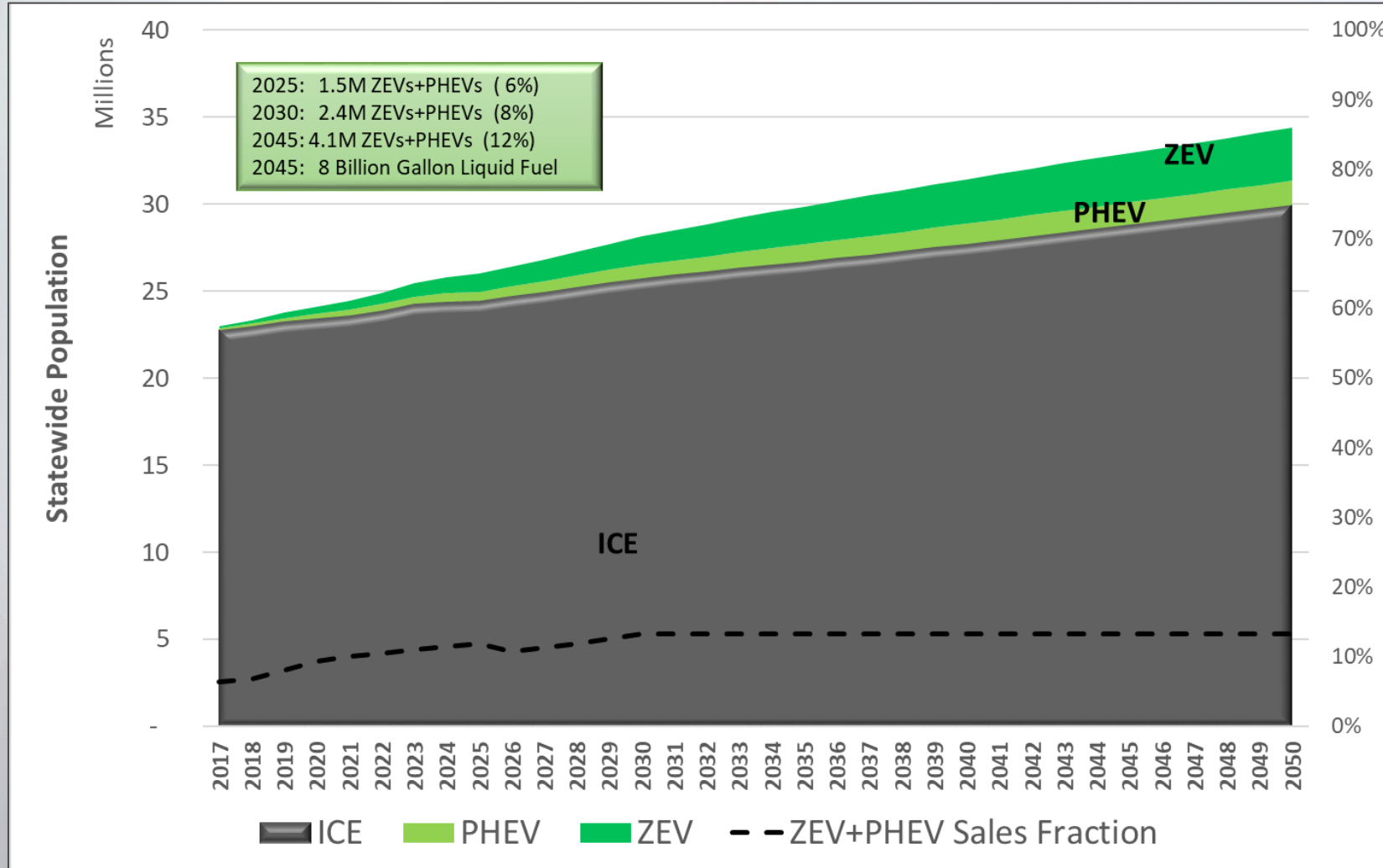
SB 32: 40% below 1990 / 2020

Exec Order: Carbon Neutrality
by 2045

Mobile Source Strategy update
Fall 2020

Scoping Plan Update
Late 2022

LDV Tech Projections in Baseline



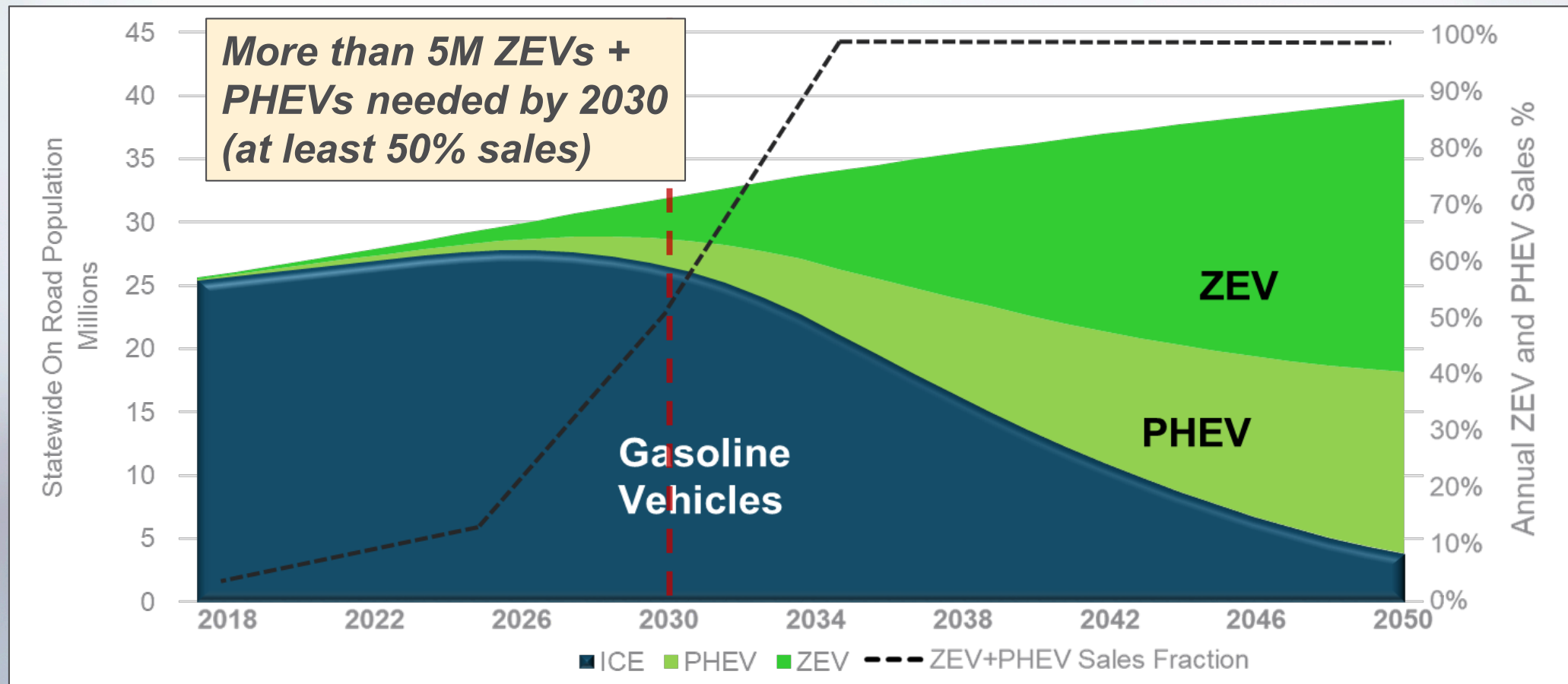
Current policies expected to achieve on-road ZEV + PHEVs (and sales):

~1.5 M by 2025 (11%)

~2.4 M by 2030 (13%)

LDV Tech Needed for Deep Reductions

- 100% sales ZEVs & PHEVs by 2035; Not aggressive enough
- **PRELIMINARY** – *New scenarios to be released in fall 2020*

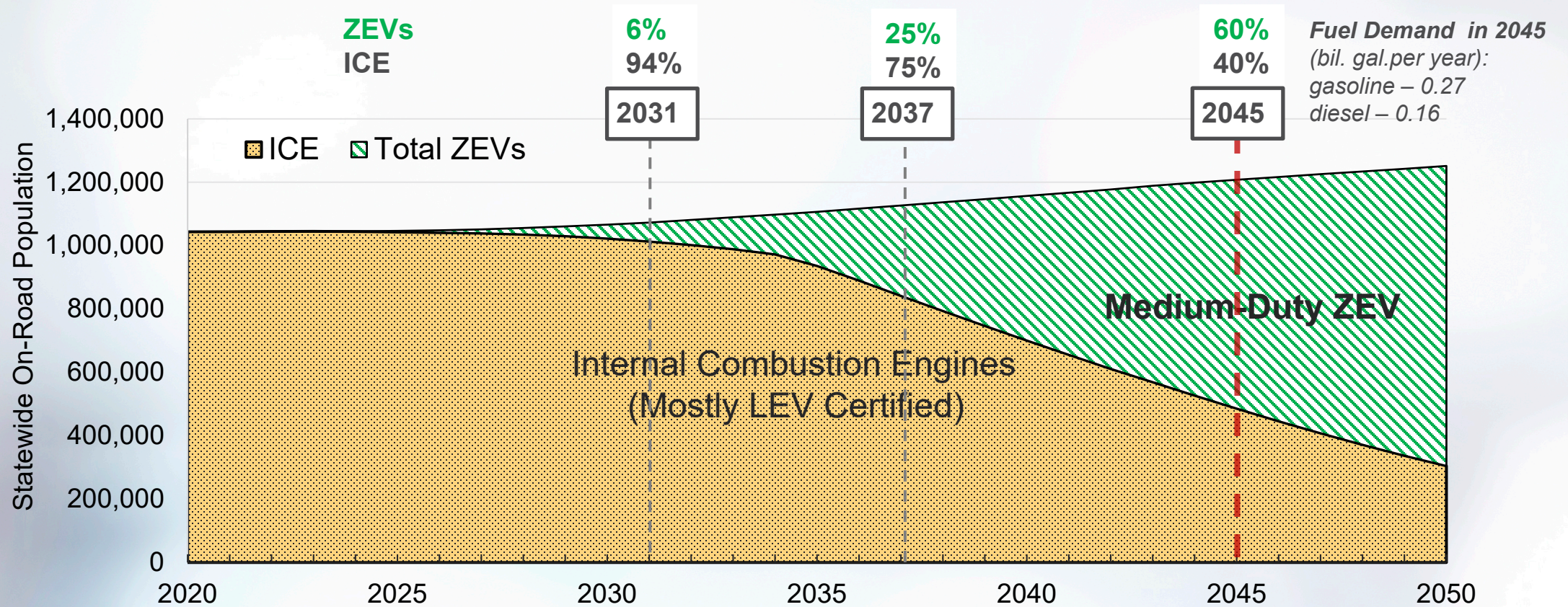


LDV Policies and Strategies

- **Stronger vehicle regs for post 2026 model years**
 - ZEV Regulation – Moving beyond early adopters
 - With large population of ZEVs – implications on wide public EVSE/H2 needs
 - LEV GHG – Pushing ICE GHG improvements on top of ZEVs
 - LEV Criteria – Ensuring real world emission reductions
 - *Board hearing late 2021*
- **Clean Miles Standard on TNCs, 2023 - 2030**
 - Increasing eVMT requirements (Uber, Lyft, etc)
 - Implications for DCFC to support higher mileage TNC drivers
 - *Board hearing Dec 2020*

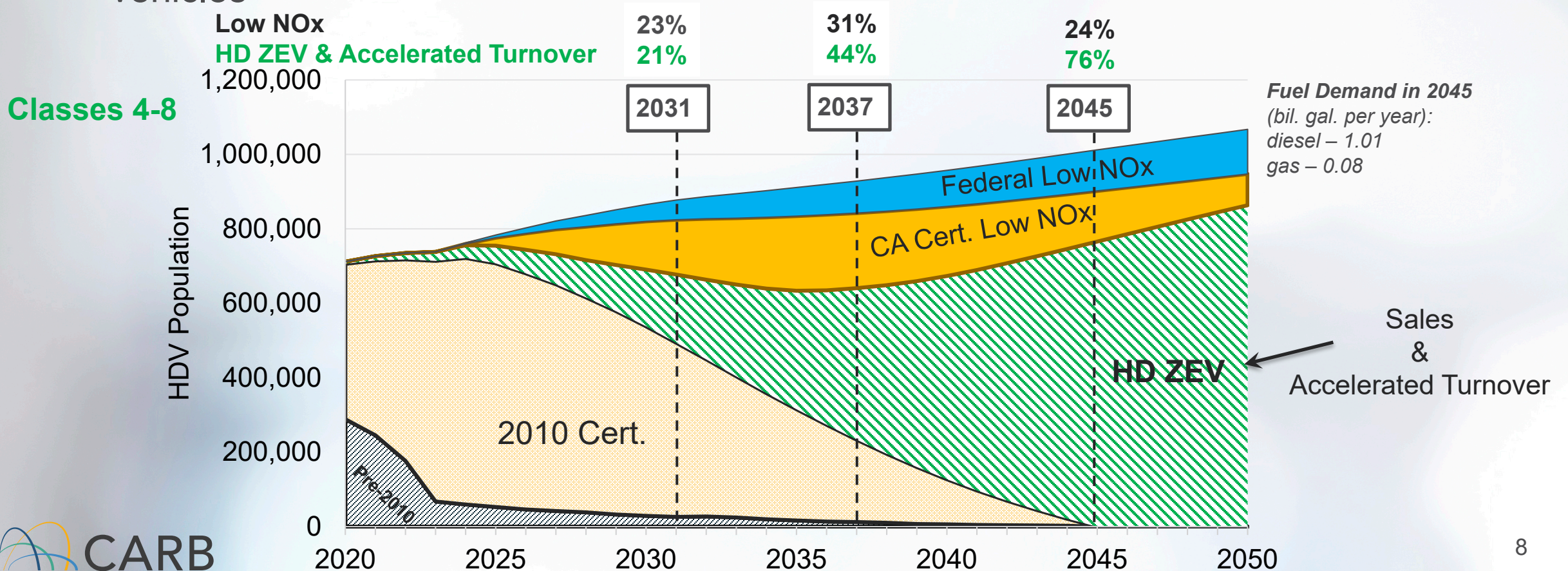
2020 Mobile Source Scenario for MDV

- Considered a scenario to achieve long-term climate goals
- Strategy: Ambitious ZEV penetration for newer vehicles



2020 Mobile Source Scenario for HDV

- To achieve NOx reduction needed to meet near term air quality goals, and also maximize the number zero-emission trucks for longer term climate goals
- A hyper ambitious ZEV penetration combined with accelerated turnover of older vehicles



M/HDV Policies and Strategies

- **Medium-Duty Vehicles** (MDVs – GVWR 8,501 -14,000 lbs) include:
 - ✓ Zero-emission technology penetration starting in 2024
 - ✓ Enhanced LEV regulations through Advanced Clean Cars 2.0
 - ✓ Continued energy efficiency improvements
- **Heavy-Duty Vehicles** (HDVs – GVWR > 14,000 lbs) include:
 - ✓ Zero-emission technology penetration starting in 2024
 - ✓ Cleaner diesel technology (i.e., Low NOx diesel) starting in 2024
 - ✓ Use of renewable fuels where electrification is not feasible
 - ✓ Continued energy efficiency improvements
 - ✓ In-use performance measures