

DOCKETED

Docket Number:	22-IEPR-03
Project Title:	Electricity Forecast
TN #:	247955
Document Title:	Presentation - Baseline Medium-and Heavy-Duty Vehicle and Fuel Forecast
Description:	2c. Bob McBride and Maggie Deng, CEC
Filer:	Raquel Kravitz
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	12/6/2022 11:24:21 AM
Docketed Date:	12/6/2022

Baseline Medium- and Heavy-Duty Vehicle and Fuel Forecast












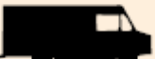







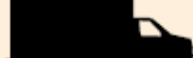






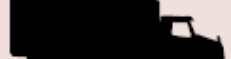

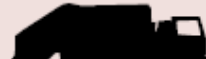


Bob McBride and Maggie Deng

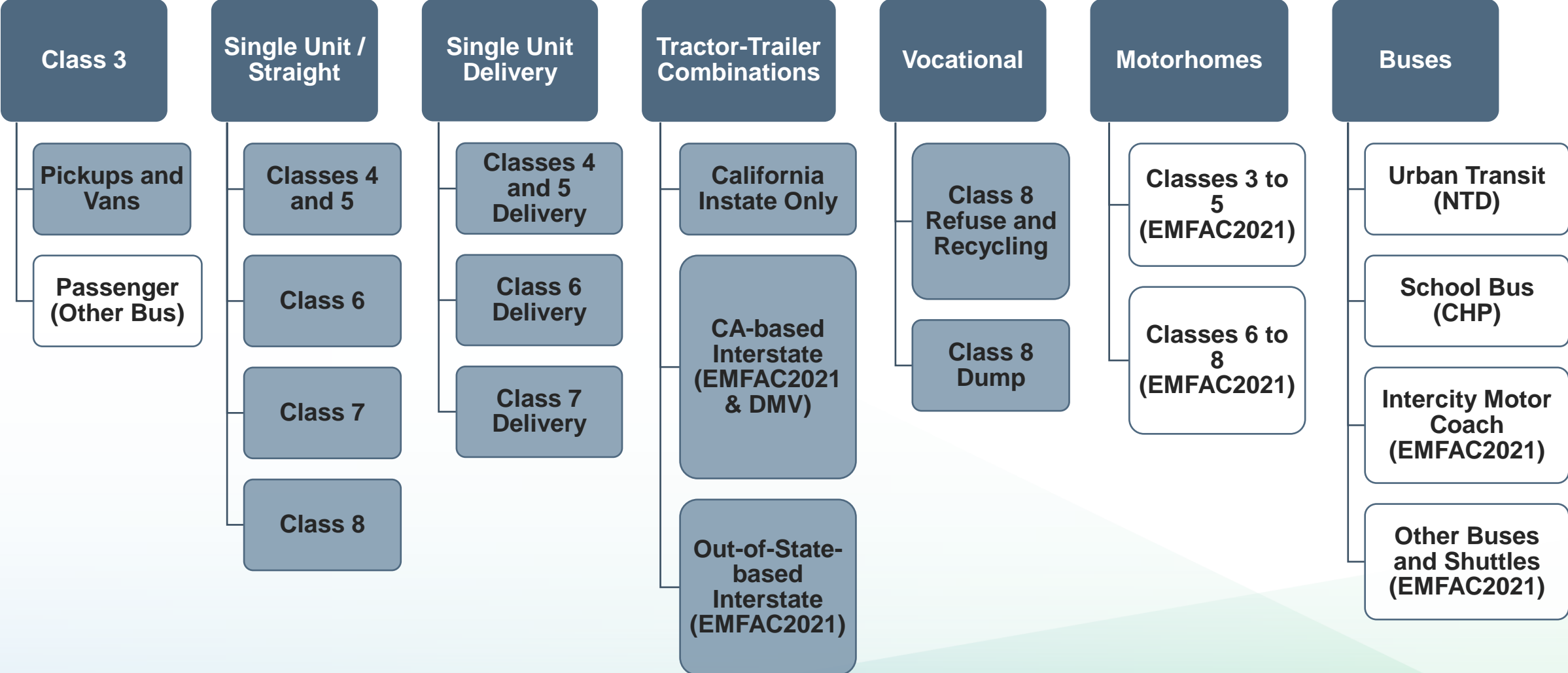


Overview

- Medium- and Heavy-Duty Vehicle Classes
- MDHD and Zero-Emission Vehicle Baseline Inputs and Assumptions
- Baseline Forecast Results

Class 1 6,000 lb & less	Small Cargo Van 	Compact Pickup 	SUV 	Minivan 	
Class 2 6,001 lb to 10,000 lb	Panel Van 	Standard Pickup 	Large SUV 	Large Passenger Van 	
Class 3 10,001 lb to 14,000 lb	Large Panel Van 	Heavy-Duty Pickup 	Straight Truck 		
Class 4 14,001 lb to 16,000 lb	Step Van 	Small Dump Truck 	Medium Straight Truck 		
Class 5 16,001 lb to 19,500 lb	Step Van 	Large Maintenance Truck 	Medium Straight Truck 		
Class 6 19,501 lb to 26,000 lb	Large Step Van 	Medium School Bus 	Medium Straight Truck 		
Class 7 26,001 lb to 33,000 lb	Class 7 School Bus 	Transit Bus 	Large Straight Truck 	2-Axle Tractor 	
Class 8 33,001 lb & Over	Coach Bus 	Large Transit Bus 	Large Straight Truck 	Tractor 	Refuse Truck 

MDHD Vehicle Classes





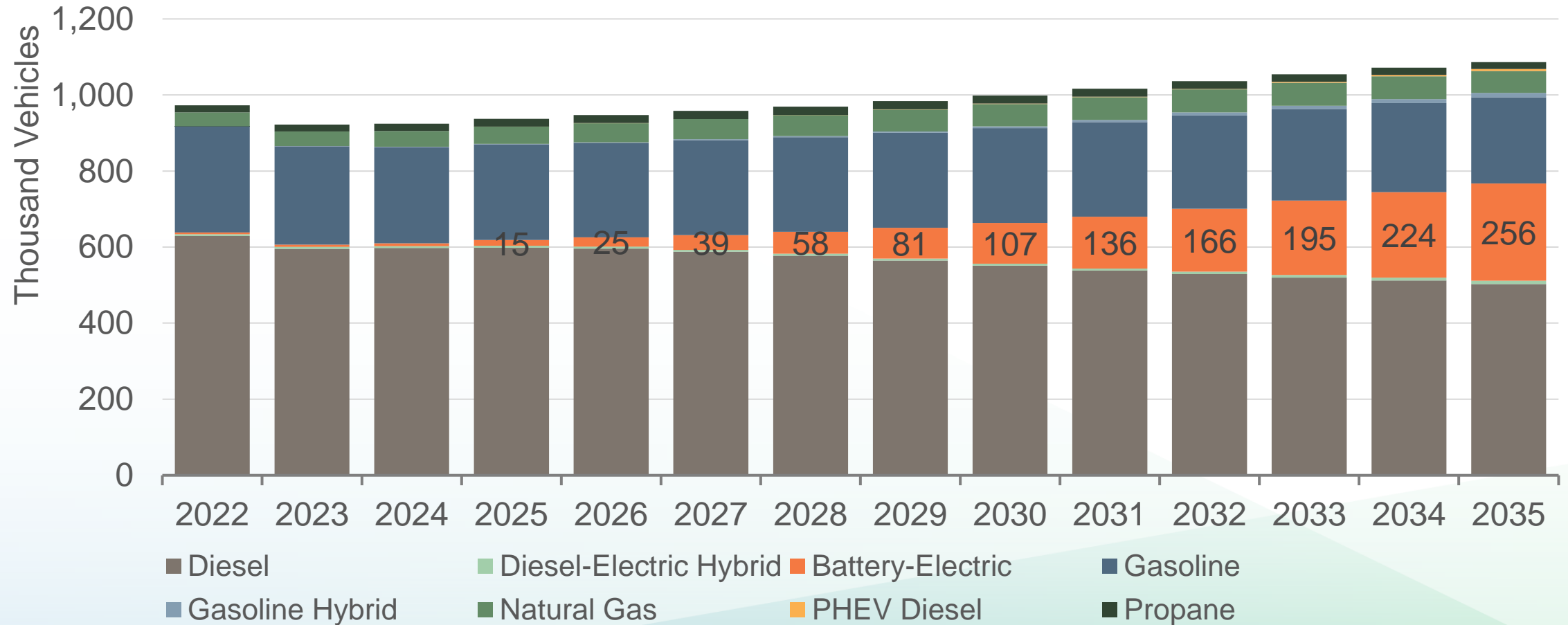
MDHD and ZEV Inputs and Assumptions

	Baseline
CARB Regulations	Advanced Clean Trucks (ACT), Innovative Clean Transit (ICT), other existing rules
Regional Regulations	SCAQMD Truck and Bus rules
HVIP (all years) and Inflation Reduction Act (IRA, to 2031)	Voucher amounts scaled to incremental truck price, to comply with ACT; HVIP and IRA stackable
Inflation Reduction Act	Up to \$7,500 for Class 3 and \$40,000 for Classes 6 and 7; ends after 2031
Hydrogen Price	NREL mid price
Electricity Rates	Commercial Rates, Mid
BEV Truck Prices given battery pack price in 2035	BEV prices based on battery price \$488/kWh in 2021, increased from 2022 to 2026 due to mineral costs, declines to \$73/kWh in 2035
Miles Per Gallon (conventional / alternative)	Same as Mid for IEPR 2021, based on ICF(2021) and KGD(2019)



Baseline MDHD Vehicle Stock

Baseline MDHD Vehicle Stock
(Trucks, Buses, Motorhomes)

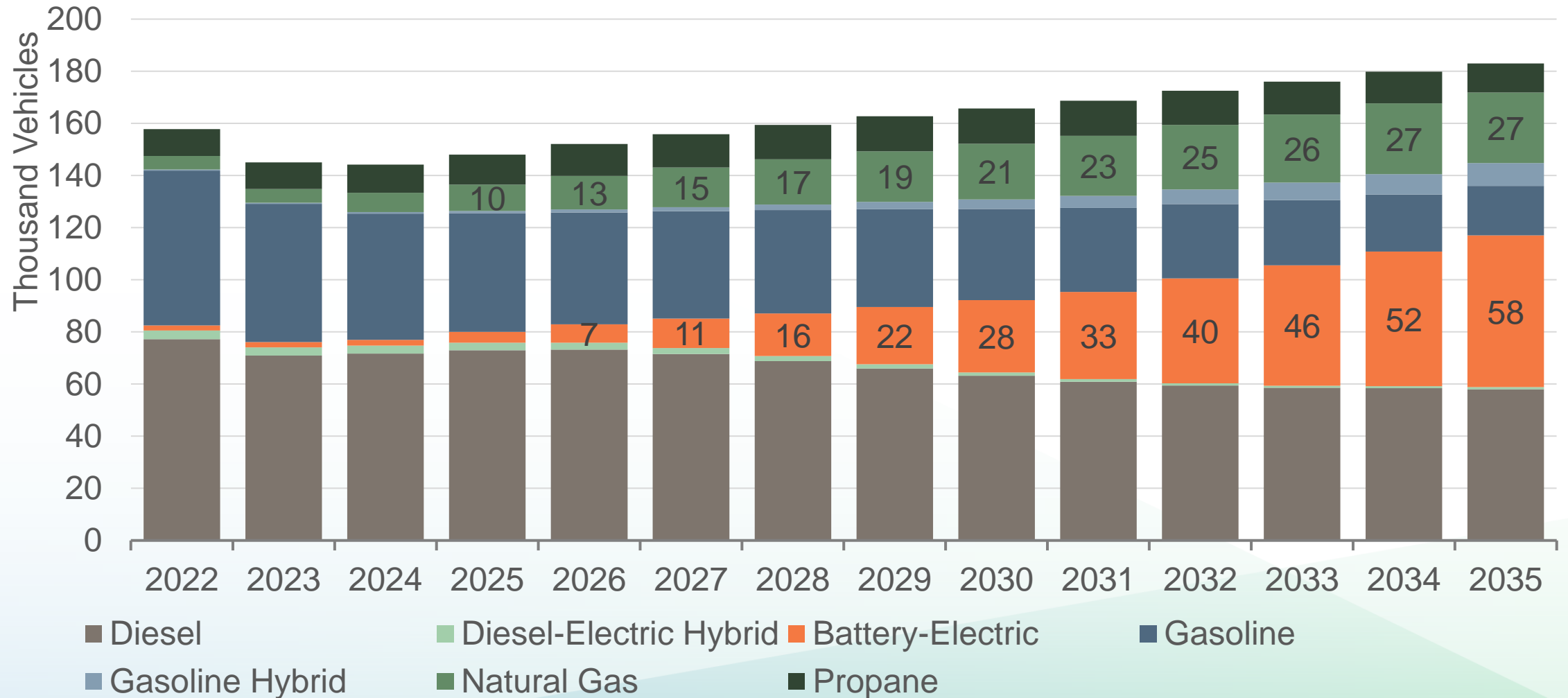


Source: Energy Commission Staff Analysis. Fuel types achieving over 5,000 vehicles by 2035 are shown.



Baseline Class 4 & 5 Truck Stock

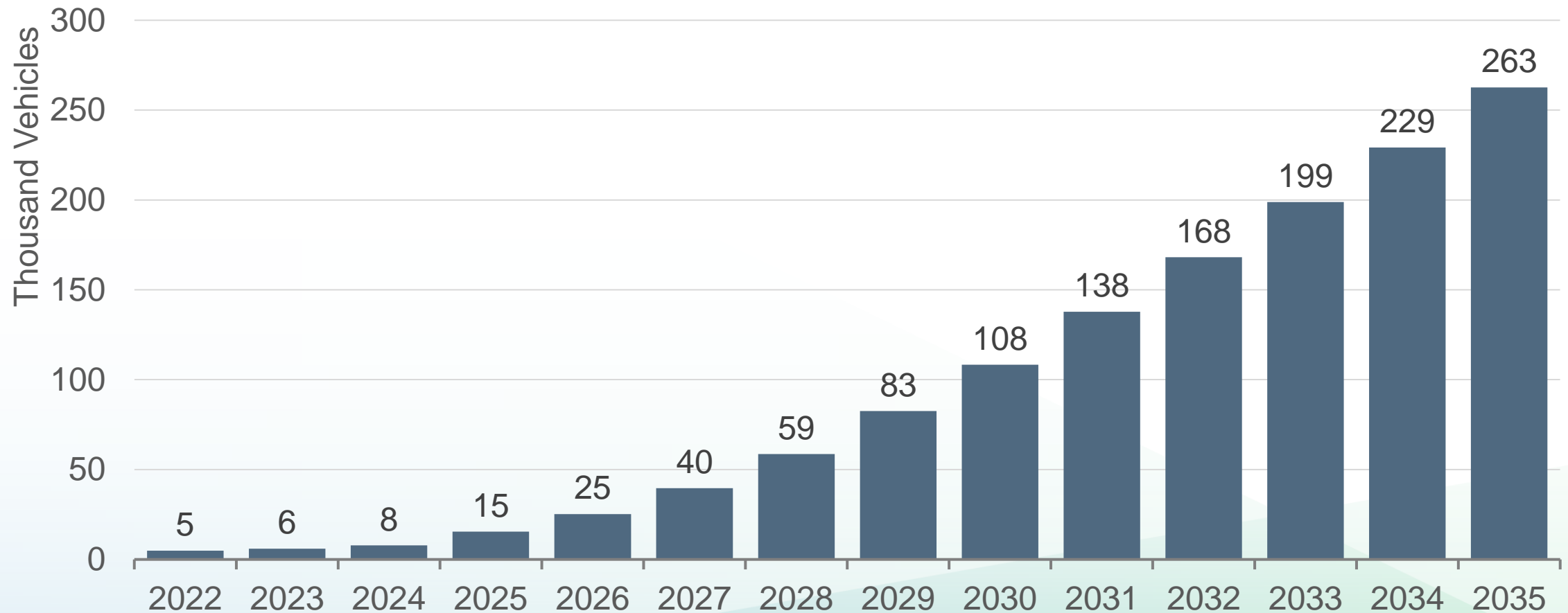
Baseline GVWR 4 and 5 Truck Stock





Baseline Zero-Emission MDHD Vehicles

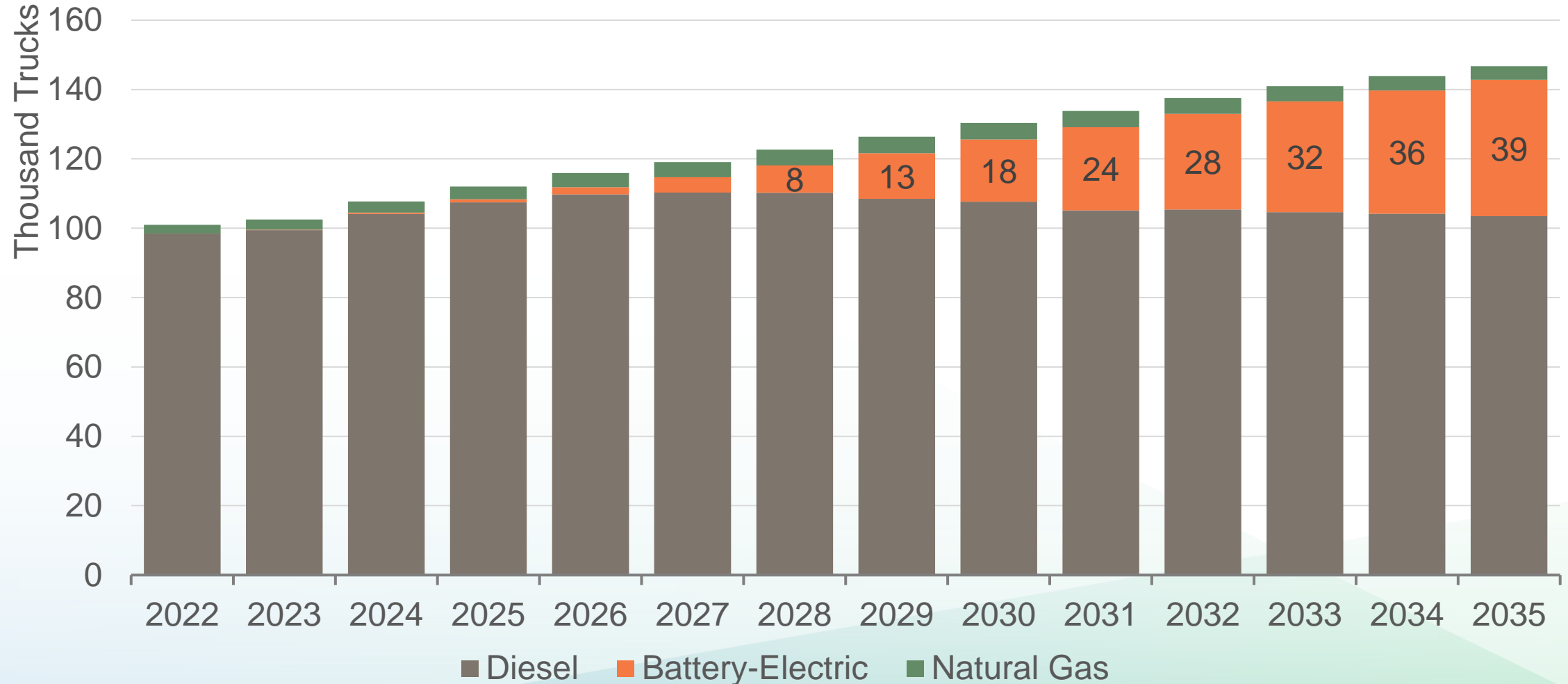
Baseline Zero-Emission MDHD Vehicles
(Trucks, Motorhomes, Buses)





Baseline GVWR8 Tractor-trailer Combination Stock

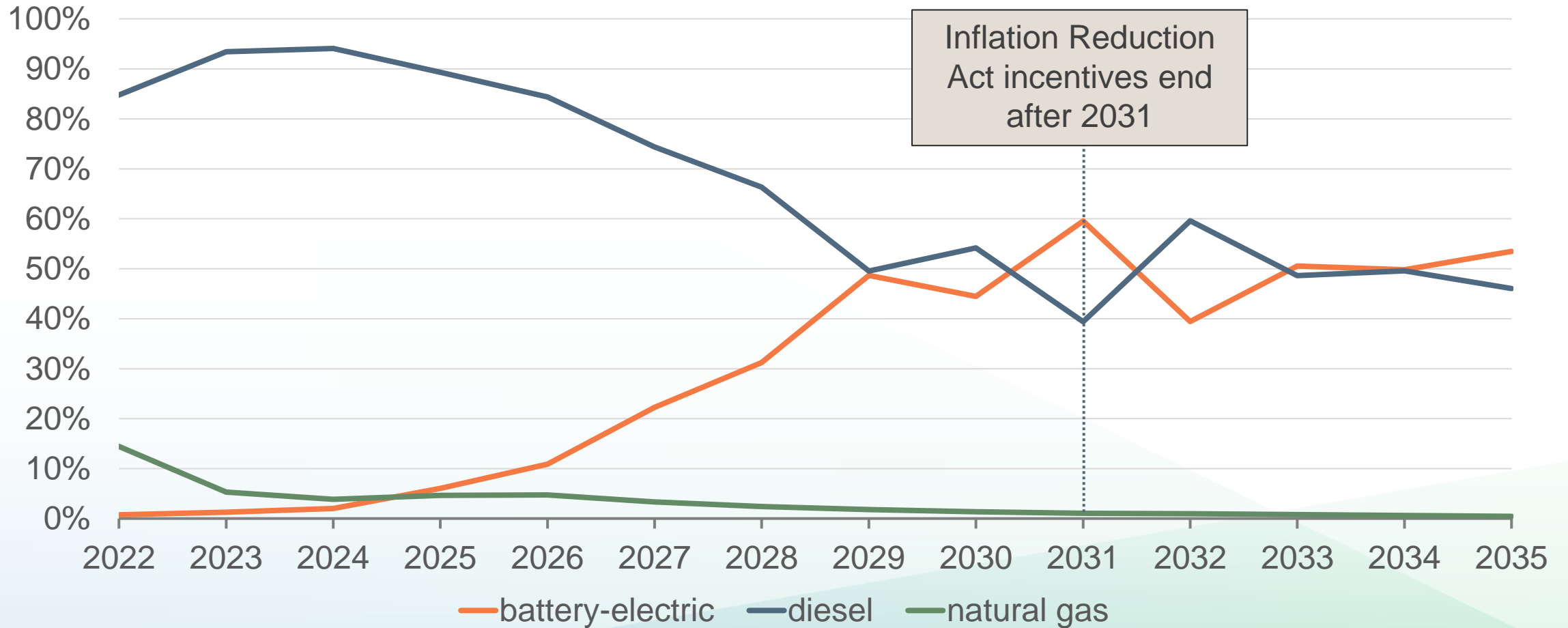
Baseline GVWR8 Tractor-trailer Combination Stock





Baseline GVWR8 Tractor-trailer Fuel Type Share

Baseline GVWR8 In-state Tractor-trailer Fuel Type Share



Thank You!



Bob McBride and Maggie Deng

bob.mcbride@energy.ca.gov

maggie.deng@energy.ca.gov