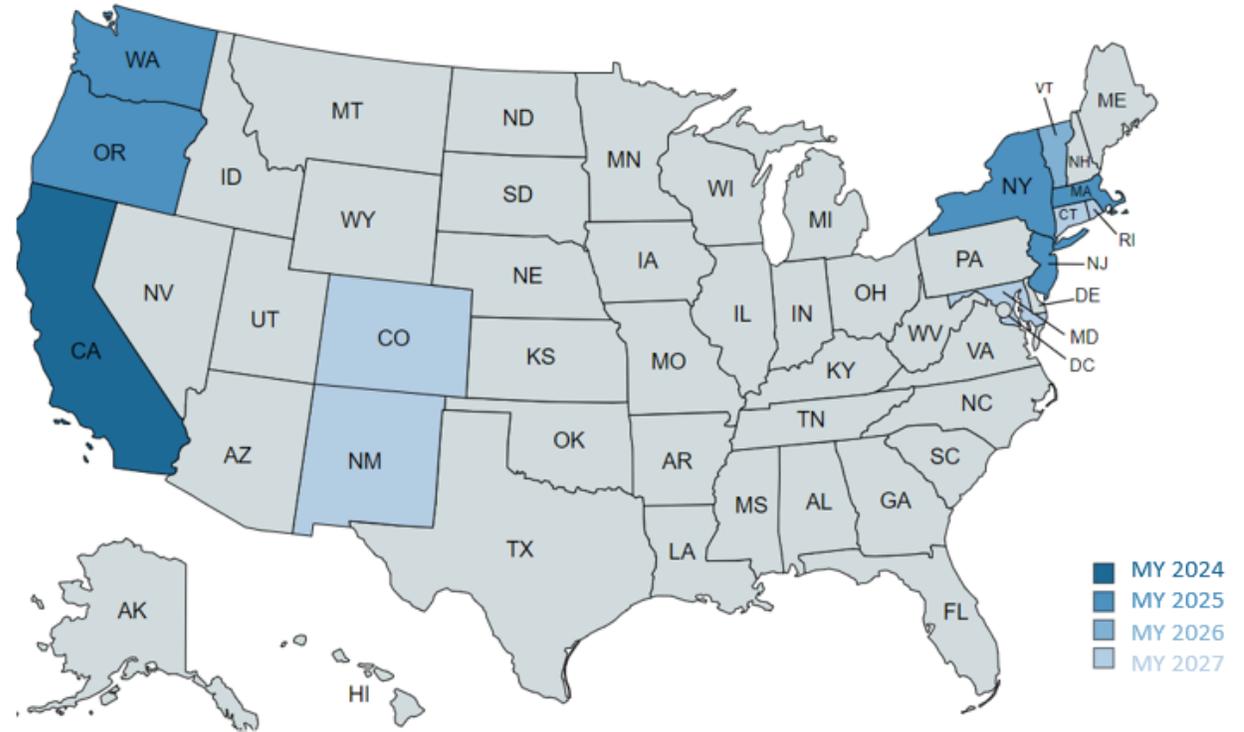


CARB Workshop
November 28, 2023

ACT Credit-Pooling Concepts for Opt-In States

Introduction/Background

- 11 States have opted-in or are on the verge of opting-in to CARB's ACT regulations
- Those States are OR, WA, MA, NJ, NY, VT, MD, CO, NM, CT and RI
- Several states (OR, WA, MA, NJ, NY and VT) have opt-ins starting in MY 2025



Introduction/Background

- The model year effective dates for the 11 State opt-in (so far) are as follows:

State	Model Year
OR	2025
WA	2025
MA	2025
NJ	2025
NY	2025
VT	2025
MD	2027
CO	2027
NM	2027
CT	2027
RI	2027

Introduction/Background

- The applicable opt-in ZEV-sales under the ACT regulations are as follows:

Table A-1. ZEV Sales Percentage Schedule

Model Year	Class 2b-3 Group	Class 4-8 Group	Class 7-8 Tractors Group
2024	5%	9%	5%
2025	7%	11%	7%
2026	10%	13%	10%
2027	15%	20%	15%
2028	20%	30%	20%
2029	25%	40%	25%
2030	30%	50%	30%
2031	35%	55%	35%
2032	40%	60%	40%
2033	45%	65%	40%
2034	50%	70%	40%
2035 and beyond	55%	75%	40%

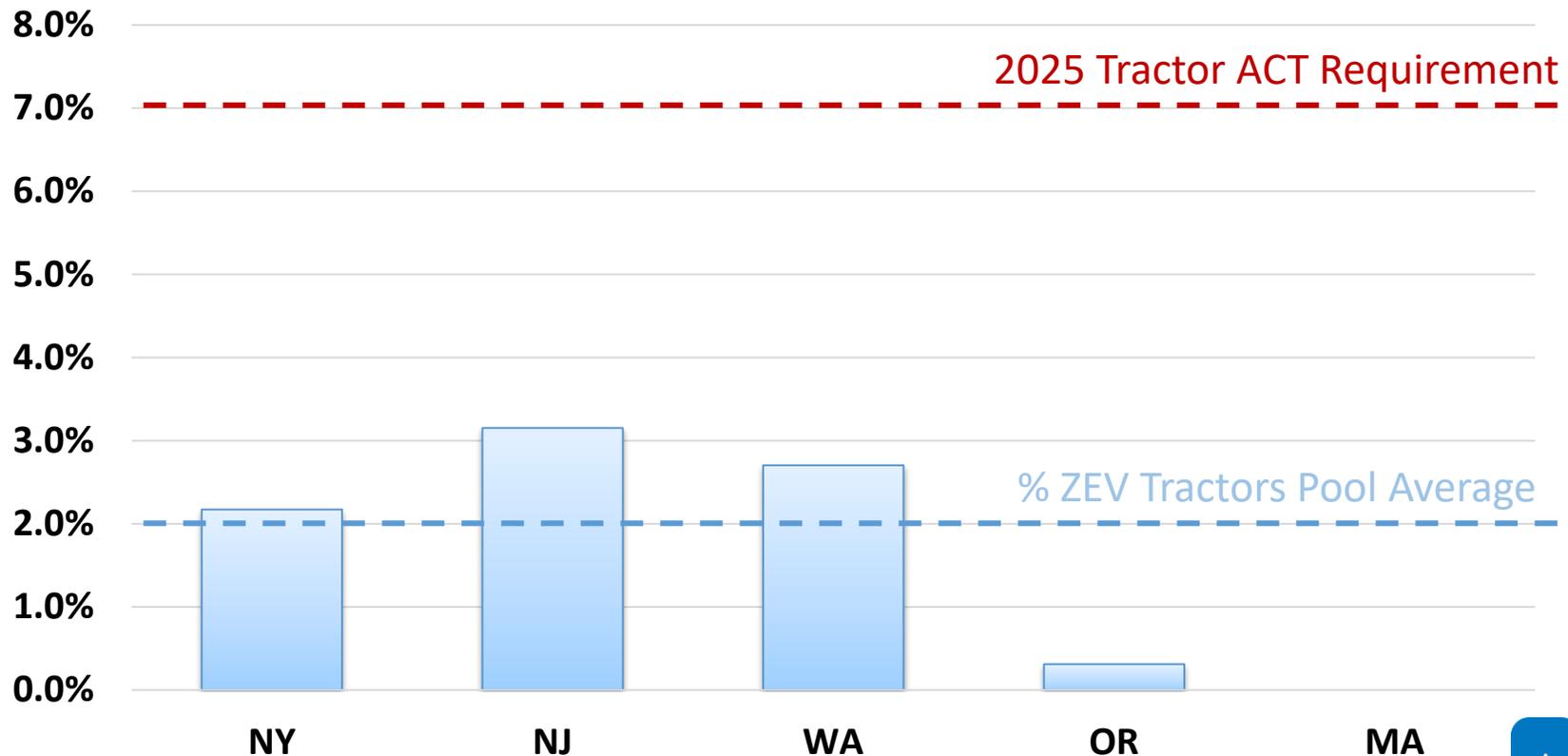
Introduction/Background

- Using EPA's HD TRUCS and MOVES models (which probably underestimates the impacts of the ACT regulations), and based on historical truck sales volumes, Ricardo has estimated that the following number of ZEV trucks could need to be sold in the opt-in states between 2027 and 2032:

State	Buses and Refuse Trucks	Short and Long-Haul Trucks (Class 4-8)	Total	Yearly Average	Yearly Average for 5 Major OEMs
OR	2,063	13,803	15,866	3,173	635
WA	3,148	20,931	24,079	4,816	963
MA	272	1,767	2,039	408	82
NJ	2,739	18,084	20,823	4,165	833
NY	5,727	37,795	43,522	8,704	1,741
VT	206	1,360	1,566	313	63
MD	1,242	8,295	9,537	1,907	381
CO	2,646	17,588	20,234	4,047	803
NM	786	5,188	5,974	1,195	239
CT	1,179	7,861	9,040	1,808	362
RI	170	1,127	1,297	259	52

Introduction/Background

Cumulative Percentage of All Registered ZEV Tractors (and Available ZEV credits) as of September 2023 Relative to Average Annual ICE Tractor Registrations of Major OEMs



Introduction/Background

- The annual sales volumes in many of the opt-in states are too low to support separate and distinct ACT deficit/credit programs
- At the same time, some opt-in states may not be able to support the mandated number of ZEV sales due to infrastructure and market-readiness issues
- It also is unlikely that there will be sufficient ZEV truck buyers in each of the opt-in states purchasing ZEV trucks in requisite numbers year-over-year in each of the 3 ACT ZEV-sales groups, especially in the early years
- On a practical level, the significant delay in the availability of Polk registration data for HDOH trucks will make it very difficult for OEMs to ensure timely state-specific ACT compliance

Introduction/Background

- As a result, OEMs need to be able to utilize a pooled credit program among the opt-in states to help ensure and monitor ACT compliance
- Without credit-pooling there is an increased risk of product shortages due to ACT compliance concerns
- Administering separate credit banks for each opt-in state could be very challenging; some states may not be well-positioned to do so

Proposal

- OEMs should be allowed to generate fungible ZEV-sale credits (with Class 7-8 tractor credits accounted for separately and fungible only within that group) that can be allocated freely among the opt-in states
- ACT deficits would be generated in an individual opt-in state when an OEM produces and delivers for sale into that opt-in state a conventionally-fueled truck
- OEMS would be able to offset that deficit with a credit generated from the sale of a ZEV-truck in any of the opt-in states; in effect, an OEM's credits would be pooled for allocation as needed to offset deficits in any of the opt-in states
- Early ZEV credits earned from ZEV-truck sales in any of the opt-in states would be eligible for pooling

Proposal

- Credits would not be discounted or weighted except as provided under CARB's ACT regulations
- To the extent that an OEM might incur fines for non-compliance (using a three-year averaging period) those fines would be allocated among all of the opt-in states on a sales-weighted basis calculated based on the sales of conventionally-fueled trucks in each of the opt-in states
- An independent entity such as NESCAUM would administer the credit-pooling program
- CARB should adopt revisions to the ACT regulations to allow for credit-pooling among all ACT states (CARB could exercise its discretion and not join the pool)