



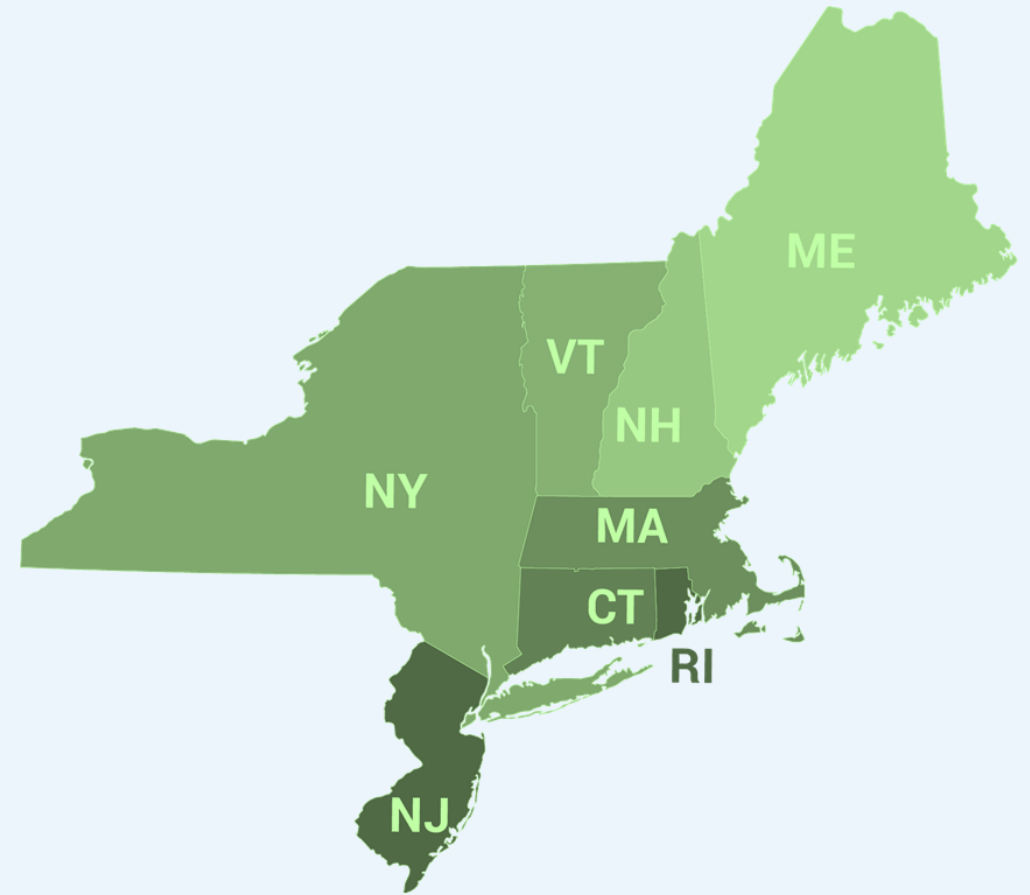
Advanced Clean Cars and Trucks

Vermont House Transportation Committee

February 12, 2025

Northeast States for Coordinated Air Use Management (NESCAUM)

- Non-profit association of state air quality agencies in the Northeast U.S. (est. 1967)
- Provides scientific, technical, and policy support on a wide range of air quality and climate issues
- Collaborates with other states, federal agencies, the automobile industry, and other key partners and stakeholders to promote zero-emission vehicles (ZEVs)
- Develops and leads multi-state initiatives, e.g.,
 - “Section 177 States” Mobile Sources Committee
 - Multi-State ZEV Task Force
 - 2013 [Multi-State ZEV MOU](#)
 - 2020 [Multi-State Medium- and Heavy-Duty ZEV MOU](#)



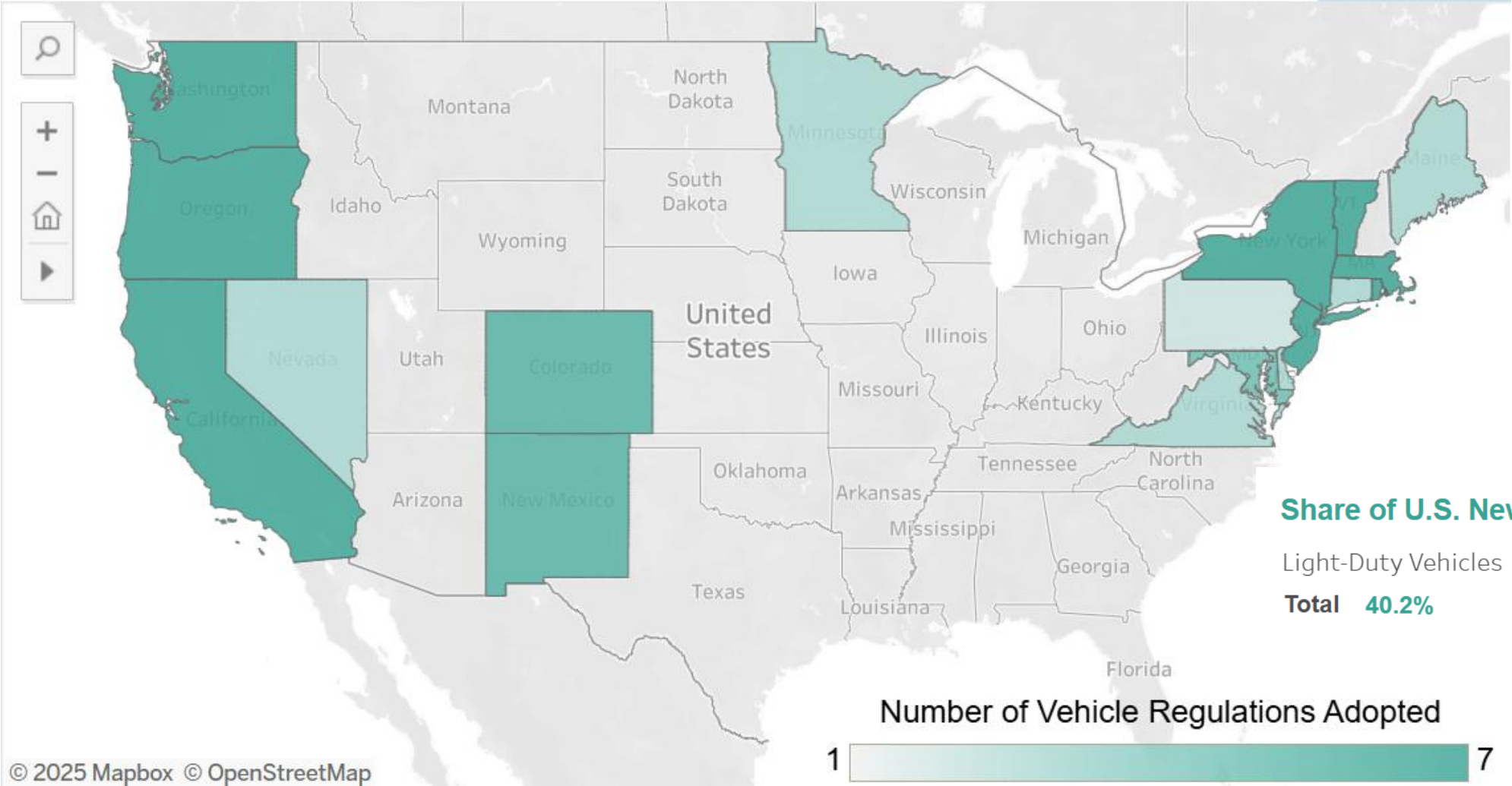
Key Clean Air Act Provisions

CAA §209(a): Preempts states from setting their own motor vehicle emission standards.

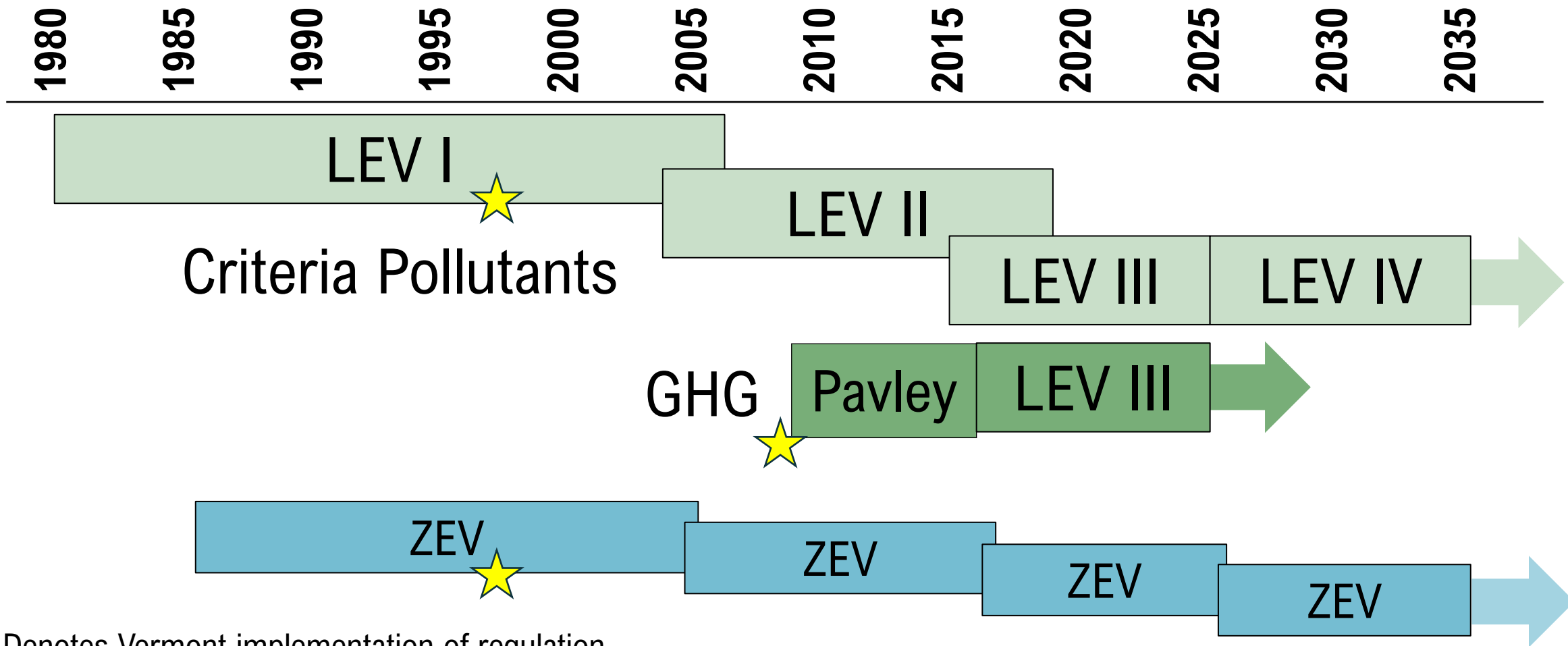
CAA §209(b): Provides California with broad discretion to set more stringent motor vehicle emission standards than EPA; authorizes California to apply for a “waiver of preemption” from EPA.

CAA §177: Authorizes states to adopt California’s motor vehicle emission standards provided the standards are identical, do not create a “third-vehicle,” and are adopted at least two-model years in advance of implementation.

Who are the Section 177 States?



Advanced Clean Cars and Trucks Builds on Existing Programs



★ Denotes Vermont implementation of regulation

What are Zero Emission Vehicle (ZEV) Sales Requirements?

- California and the “Section 177” states adopt regulatory requirements that drive technology shifts in transportation and mobility
- Annual increase in percentage of ZEVs that are delivered to each state
- Vehicle supply requirements - Automakers are the regulated entities
- States implement complementary policies to drive demand to meet the increasing supply of ZEVs



Why ZEV Sales Requirements?

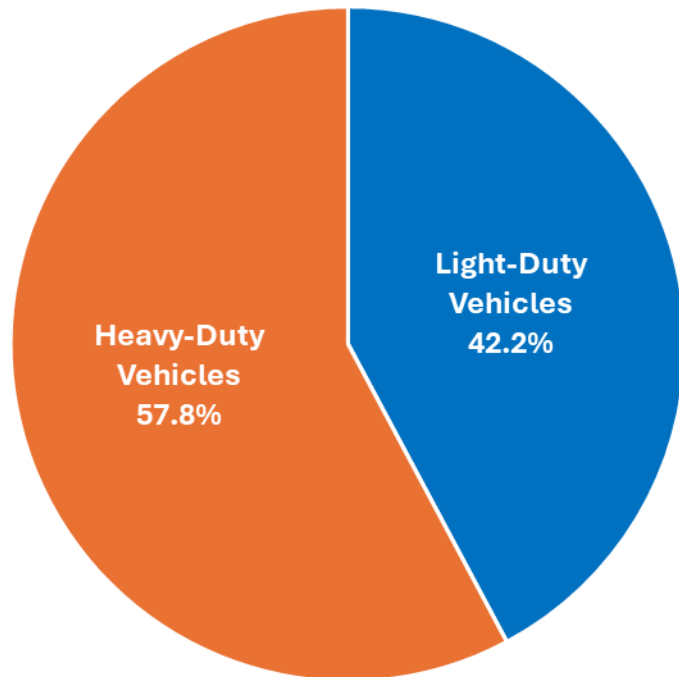
- **Improve air quality:** Major source of smog-forming pollutants, particulate matter, and air toxics that harm public health
- **Promote equity and justice:** Helps to address historical and current public health, economic, and social inequities
- **Mitigate climate change:** Transportation is the largest source of greenhouse gas (GHG) emissions in the U.S.
- **Provide regulatory certainty:** Create a regulatory floor and market certainty that is critical for industry, fleets, utilities, and state and local governments to effectively plan and manage the transition to ZEVs and infrastructure build out
- **Generate economic growth:** Transitioning to ZEV attracts public and private investments and creates high-quality jobs
- **Enhance energy security and resilience:** Reduces reliance on foreign oil and insulates consumers from global market fluctuations



Why ZEV Sales Requirements?

Vehicles Are a Significant Source of Criteria Pollutant Emissions

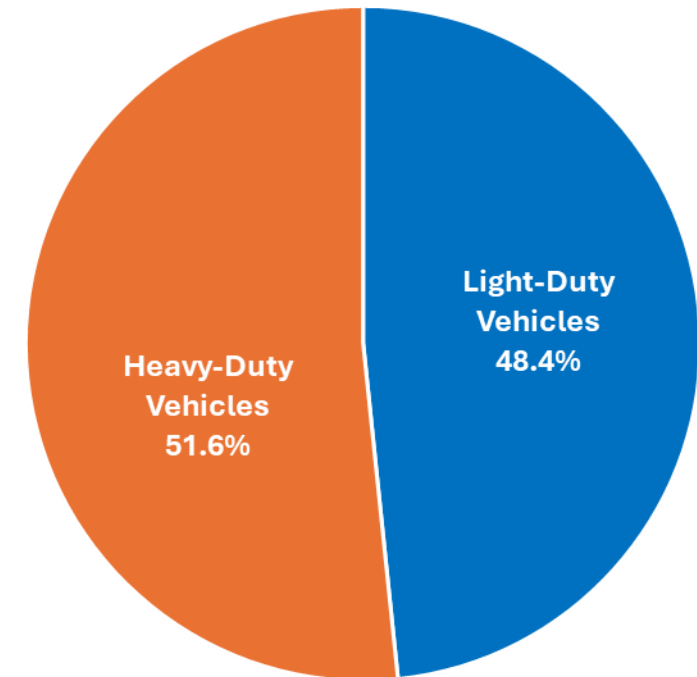
2020 U.S. On-Road NO_x Emissions



NO_x – smog-forming oxides of nitrogen emissions are a precursor to ground-level ozone

$\text{PM}_{2.5}$ – particulate matter < 2.5 micrometers in diameter

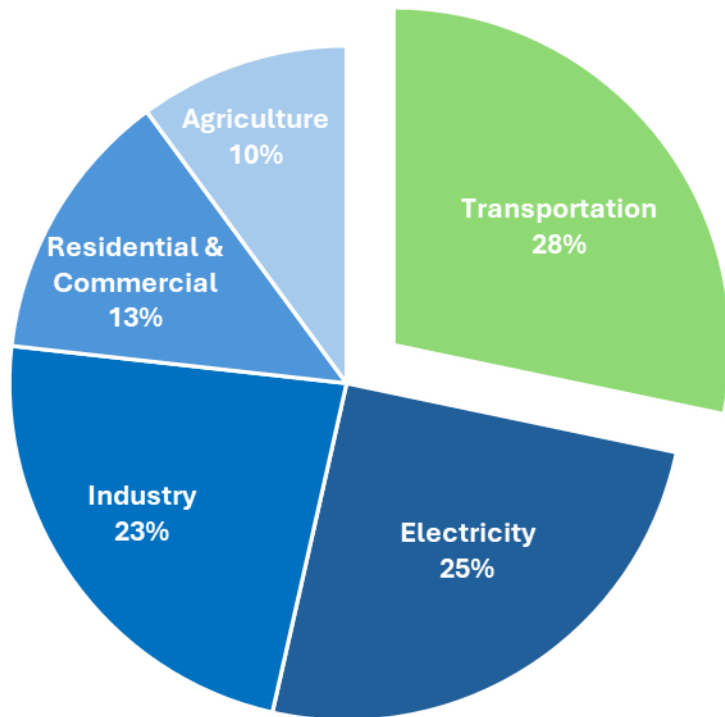
2020 U.S. On-Road $\text{PM}_{2.5}$ Emissions



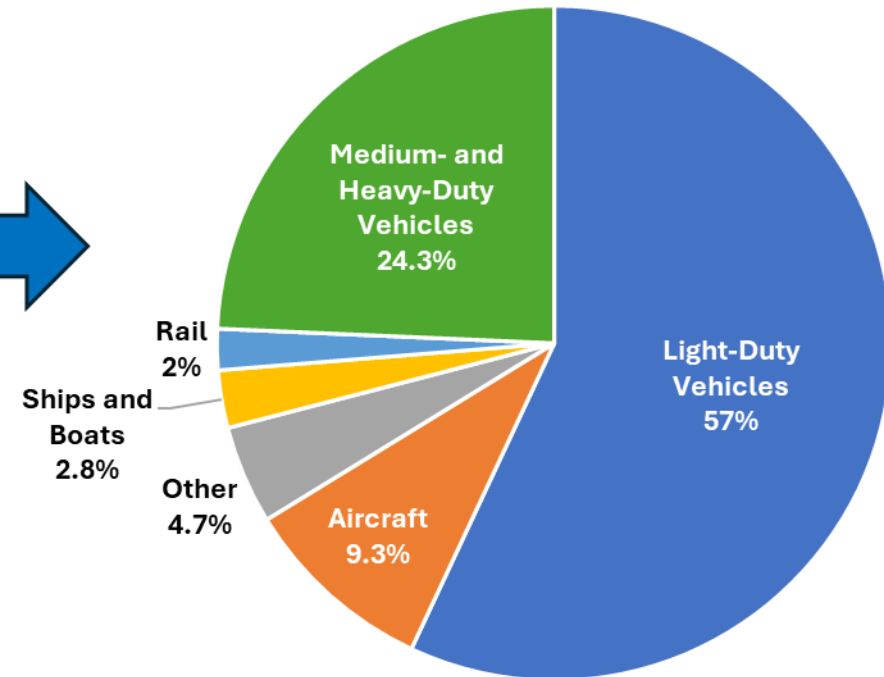
Why ZEV Sales Requirements?

Vehicles Are a Significant Source of Greenhouse Gas Emissions

2022 U.S. GHG Emissions by Sector

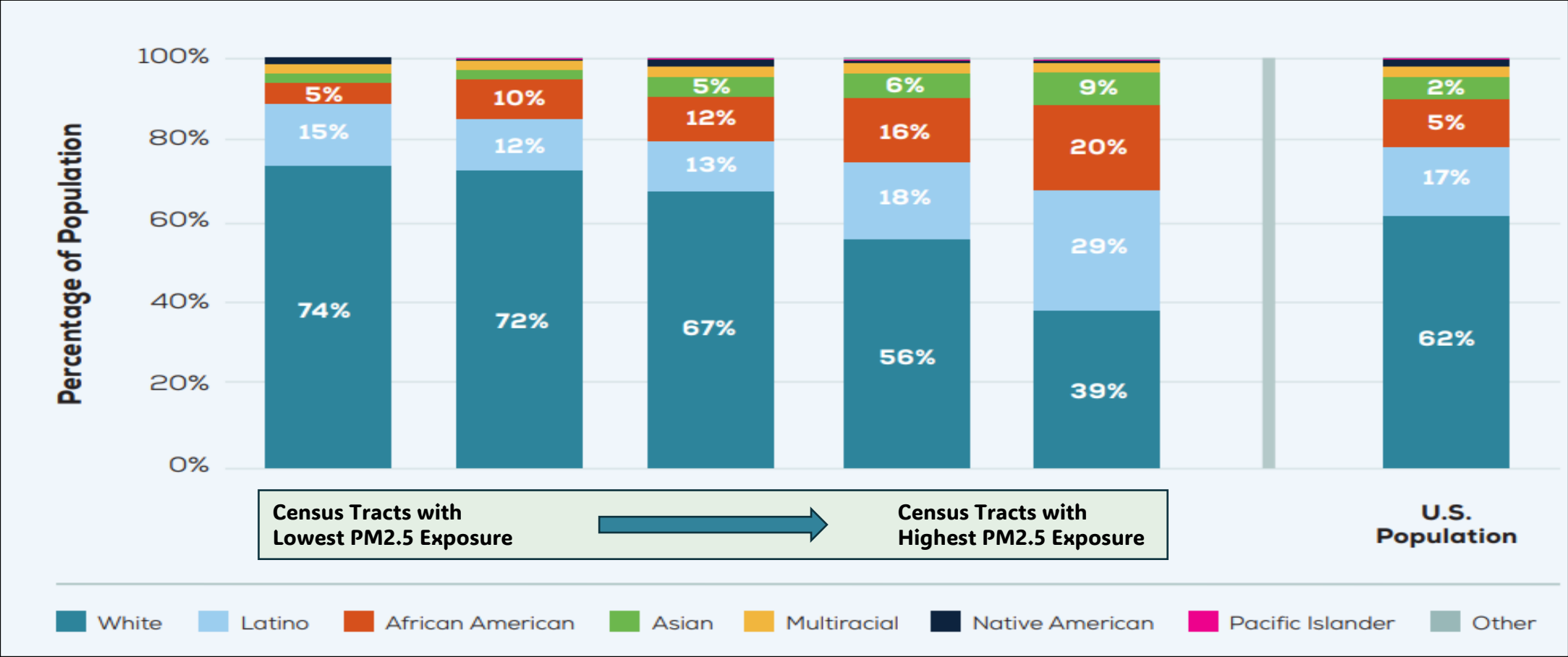


2022 U.S. Transportation GHGs by Source



Disproportionate Impacts on Frontline and Overburdened Communities

On-Road PM_{2.5} Pollution Exposure by Racial Demographic



Source: D. Reichmuth, Air Pollution from Cars, Trucks and Buses in the US: Everyone is Exposed, But the Burdens are not Equally Shared, Union of Concerned Scientists (Oct. 16, 2019), <https://blog.ucsusa.org/dave-reichmuth/air-pollution-from-cars-trucks-and-buses-in-the-u-s-everyone-is-exposed-but-the-burdens-are-not-equally-shared/>.

Ensuring the Success of ZEV regulations

Adopters

State Environmental Agency (Air Quality Program/Mobile Sources Program) - Typically has jurisdiction over controlling emissions from mobile sources; Sets standards for automakers, administers compliance assistance and enforcement

State Regulated Utility Commissions – Make Ready programs, Rate Design, Future-proofing, Infrastructure

State Transportation Agency – Incentive Programs, Capital Investments, Charging Infrastructure planning, Fleet Advisory Services

State Energy Office – Data Collection, Target Setting, Ratepayer advocacy

State Commerce Agency – Workplace Incentives, Integrated Funding Opportunities

State Weights and Measures Program – Consumer protection for fueling infrastructure

State Health Agency – Identifying disproportionately impacted communities, assessing public health impacts of emission reduction

Implementing Partners

Advanced Clean Cars II (ACCII) Regulation

Three Regulatory Components

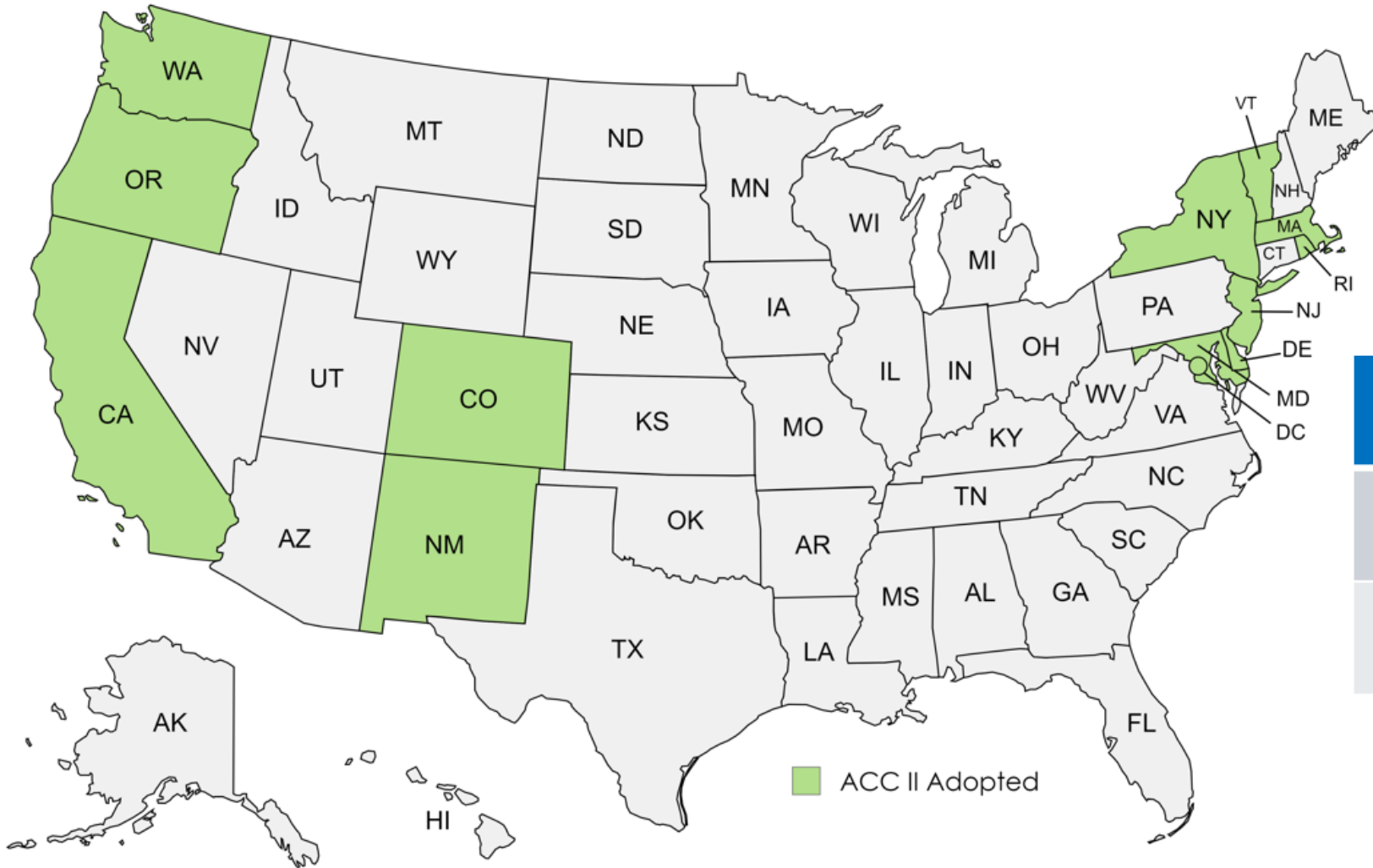
ZEV Regulation

ZEV Assurance Measures



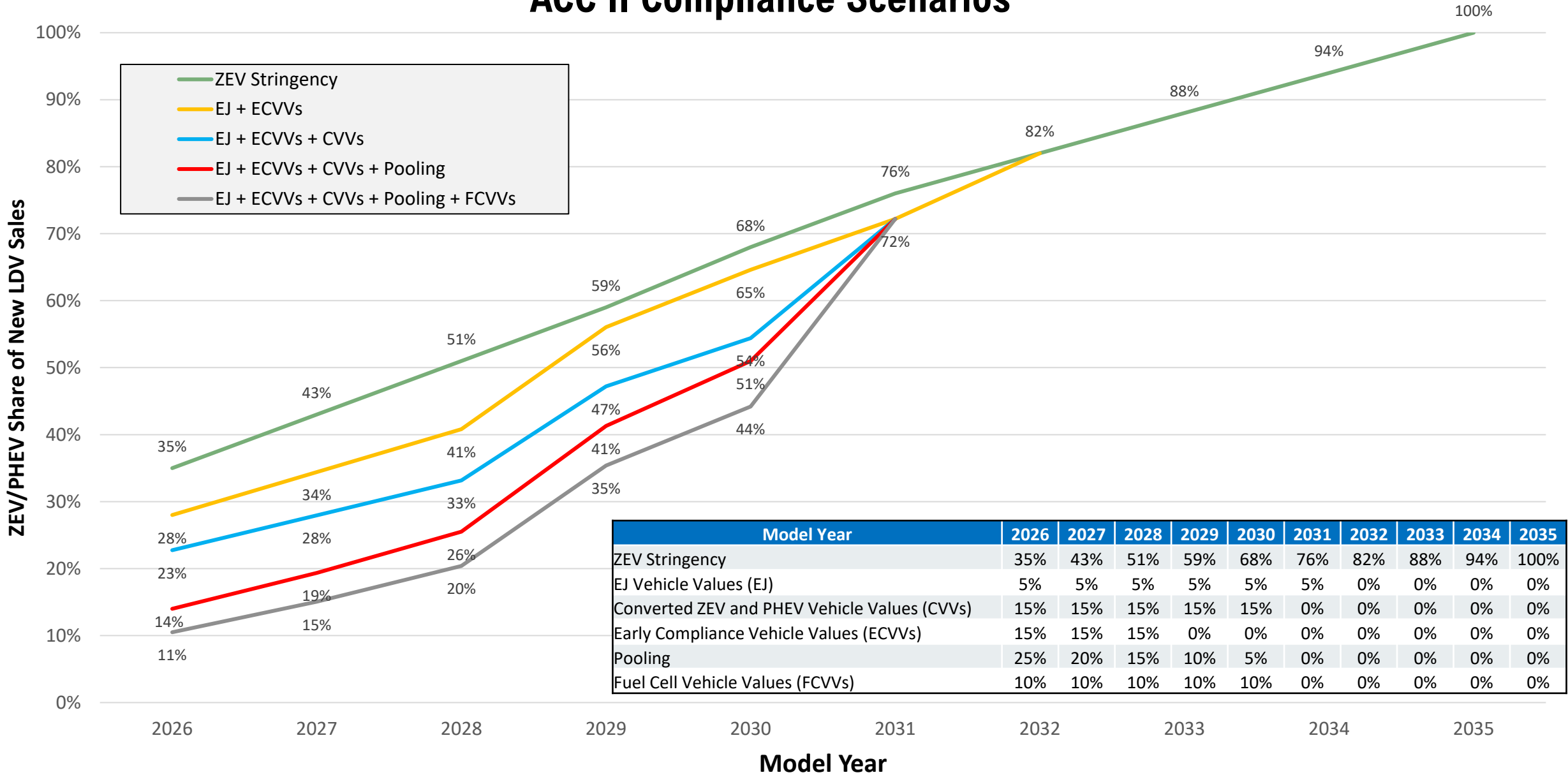
LEV Regulation

Status of ACC II Adoption Across the U.S.

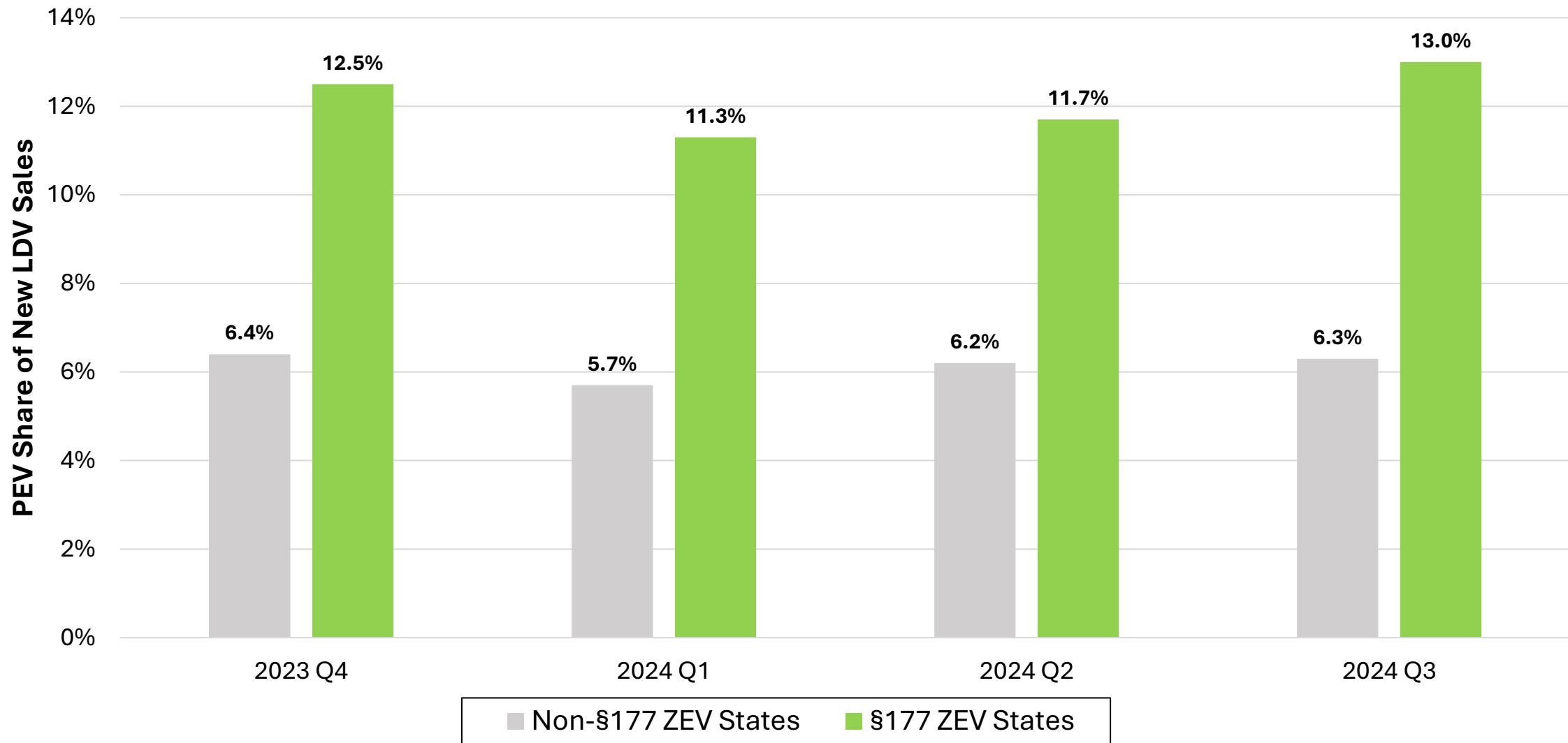


Implementation Model Year	States
2026	CA, MA, NY, OR, VT, WA
2027	CO, DC, DE, MD, NJ, NM, RI

ACC II Compliance Scenarios



Light-Duty Plug-in Electric Vehicle Sales in the Last Four Quarters: §177 ZEV States vs. Non-ZEV States



Section 177 ZEV States include: CO, CT, DC, DE, MA, MD, ME, MN, NJ, NM, NV, NY, OR, RI, VA, VT, WA

Source: Experian via Atlas Public Policy's EV Hub

Advanced Clean Trucks (ACT) Regulation

What is the Advanced Clean Trucks (ACT) Rule?



Manufacturer sales requirement – not a purchase requirement
















Guarantees a minimum supply of ZEVs in participating states



Credit/deficit system for compliance flexibility

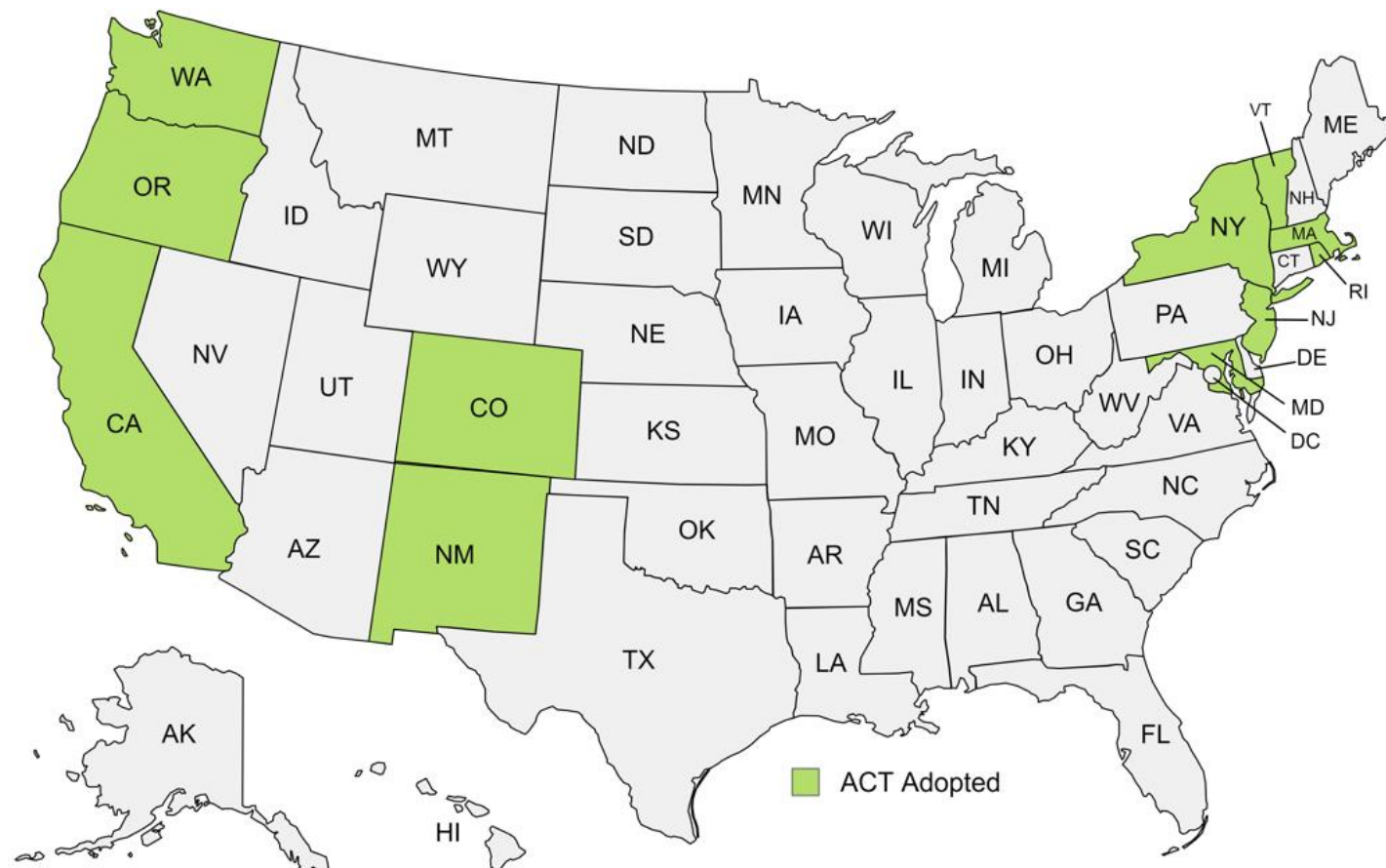


Vehicles covered in ACT

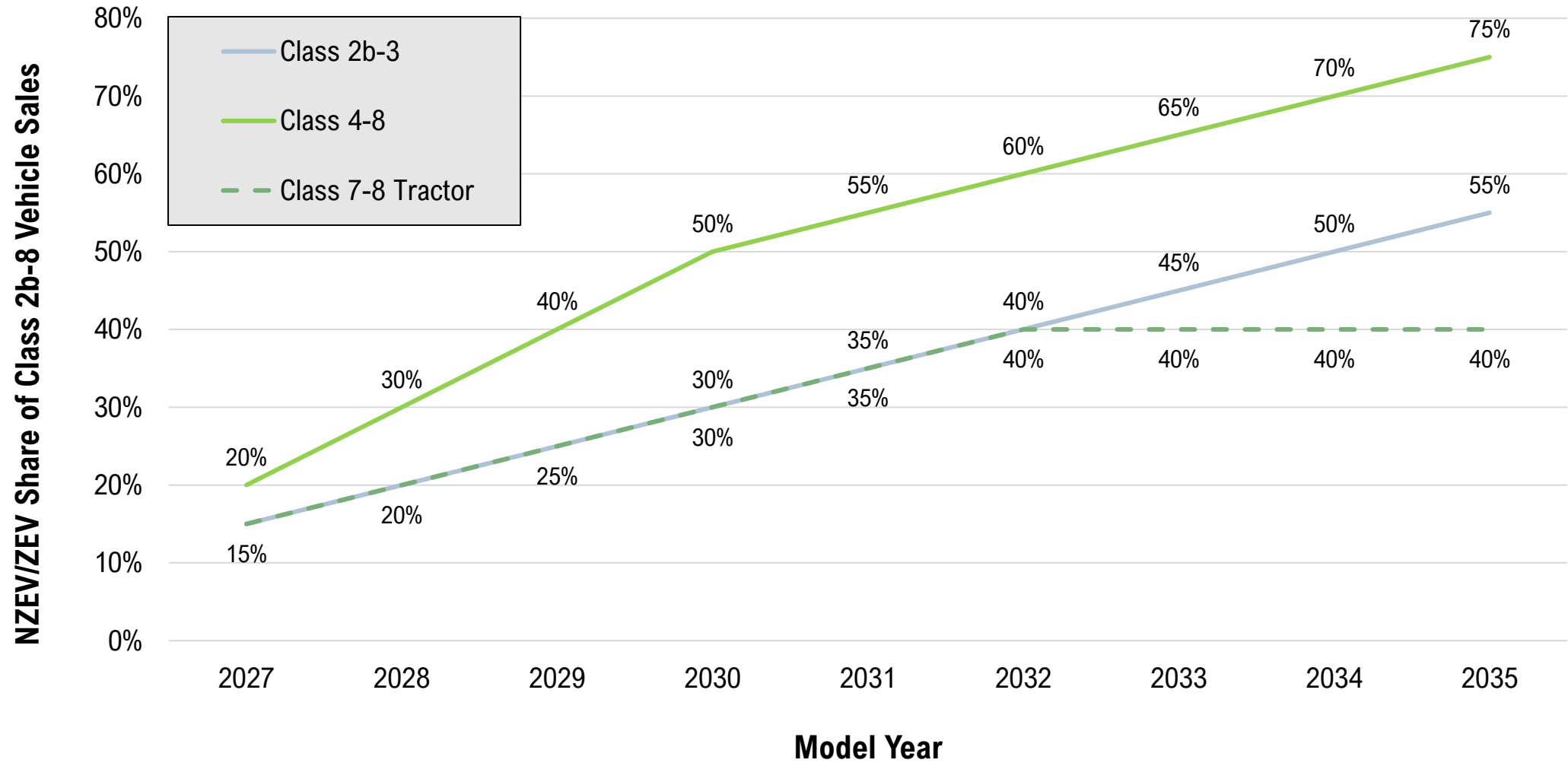
Class 2b-3	Class 4-8	Class 7-8 Tractors
   	     	  

Advanced Clean Truck (ACT) Adoption

Implementation Model Year			
2024	2025	2026	2027
CA	MA NJ NY OR WA	VT	CO MD NM RI



ACT – Annual ZEV Requirements



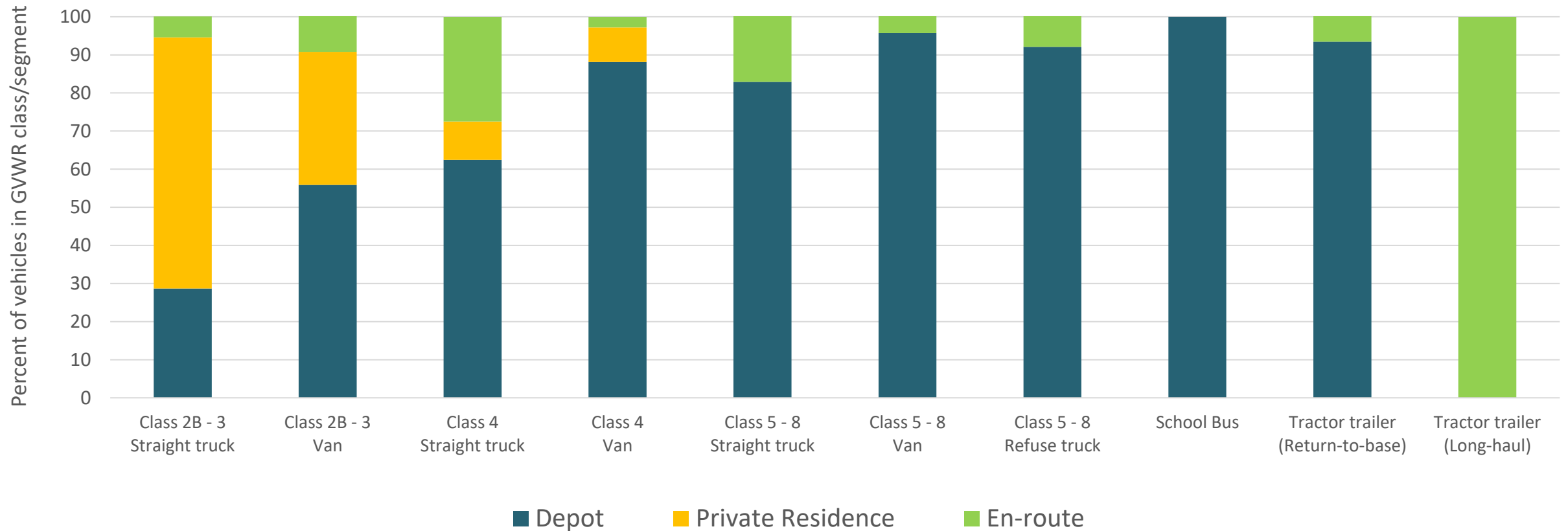
ACT Flexibilities

- Early action credits may be earned before regulation goes into effect (timing varies by state)
- Credits may be banked for future use
- Credits may be traded/sold between manufacturers
- Secondary vehicle manufacturers may opt into the ACT credit trading and transfer provision
- Near Zero Emission Vehicle (NZEV) credits may fulfill up to 50% of deficits
- Deficits may be carried forward for three years
- NZEV credits may be used to fulfill a deficit
- Credits may be used interchangeably to meet non-tractor deficits
- Low tractor volume flexibility (< 25 tractor deficits) may use non-tractor credits to meet tractor deficits
- Low volume exemption for manufacturers with < 500 average annual on-road vehicle sales

What kind of Infrastructure is needed?

Charging location varies by vehicle segment

Base charging location of MHD vehicles, by class and segment



Source: Atlas Public Policy analysis. For long-haul tractors, school bus: modeling assumptions. For others: Federal Highway Administration Vehicle-In-Use Survey, 2021

Thank you

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