



Advanced Clean Fleets (ACF) Regulation Overview

San Diego Air Pollution Control District

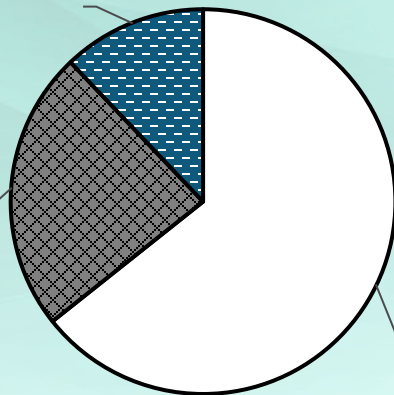
January 2, 2024

Biggest Trucks Have Highest Emissions

Daily Truck Population



Class 7-8 Tractors
219,000 (12%)



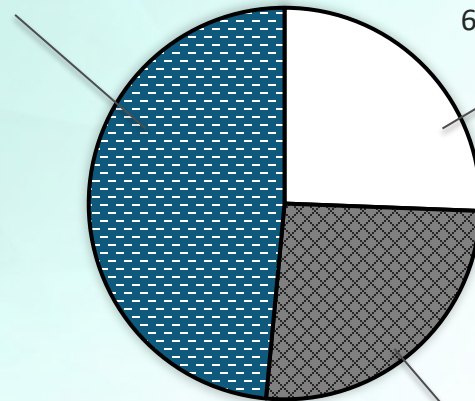
Class 4-8 Straight
Trucks and Buses
427,000 (24%)



Class 2b-3 Trucks and
Vans
1,164,000 (64%)

Daily NOx Emission

Class 7-8 Tractors
129.7 tpd (48%)



Class 2b-3 Trucks
and Vans
68.5 tpd (26%)

Class 4-8
Straight
Trucks and
Buses
69.3 tpd...

Source: California Air Resources Board (CARB) Emissions Inventory EMFAC2021, (<https://arb.ca.gov/emfac/>) Calendar Year 2021, including California International Registration Plan (IRP) and out-of-state IRP trucks; excludes motor homes, transit 2 buses, and school buses.

Measures to Clean Up Heavy-Duty Vehicles



2018
Innovative Clean
Transit



2020
Advanced
Clean Trucks



2021
Heavy-Duty
Inspection and
Maintenance



Future
Zero-Emission
Truck Measure

2019
Zero Emission Airport
Shuttle



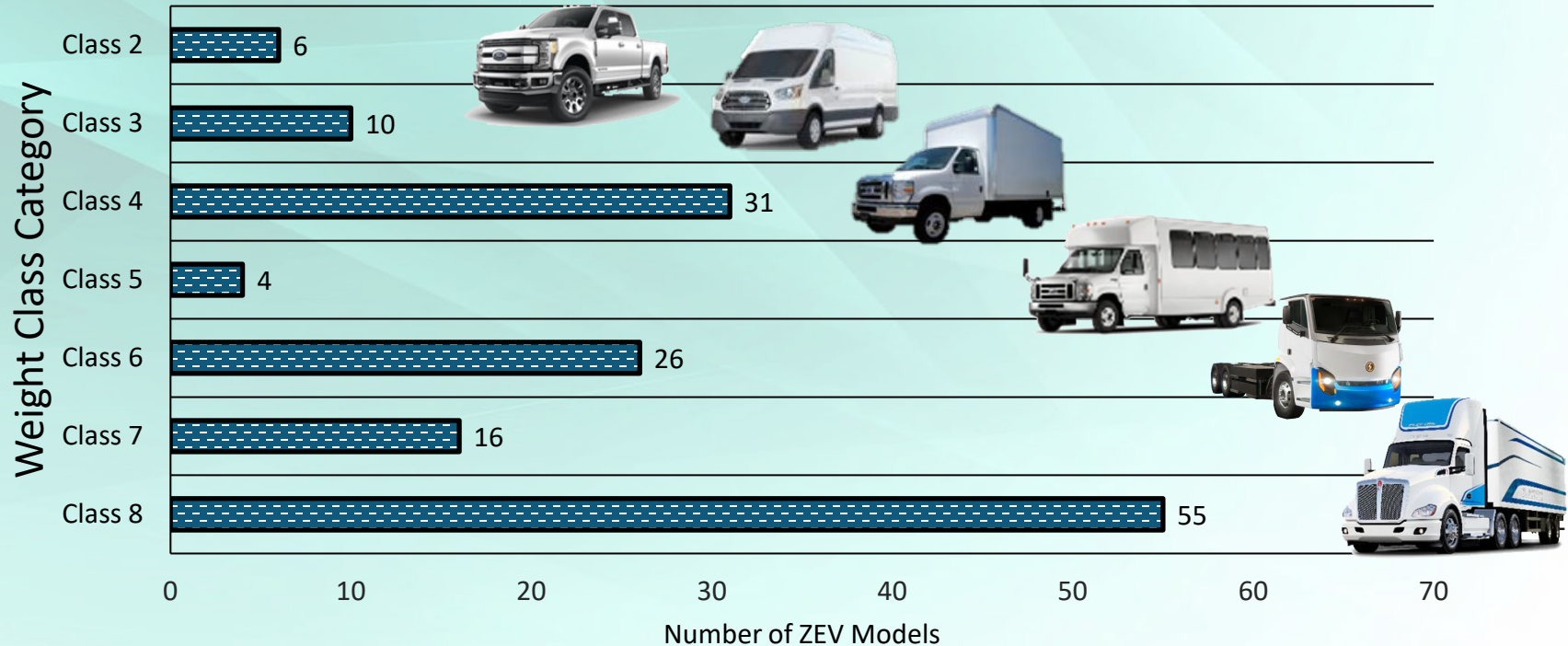
2020
Heavy-Duty
Omnibus



2023
Advanced
Clean Fleets



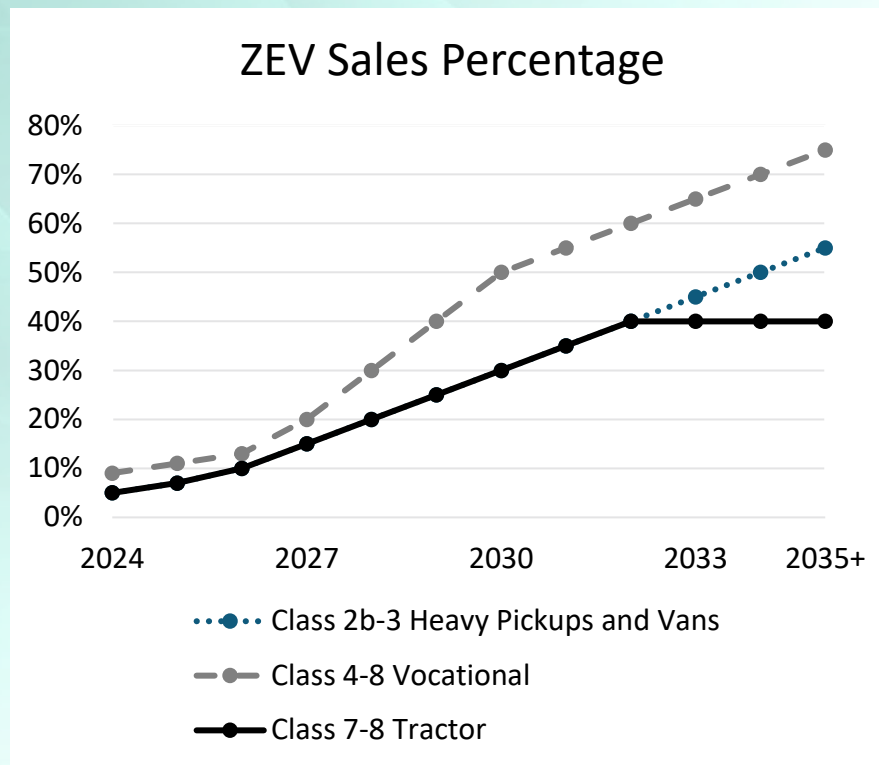
ZEV Models in United States



135 models already delivered to fleets, 148 different models are available to be ordered/pre-ordered,

Advanced Clean Trucks Regulation

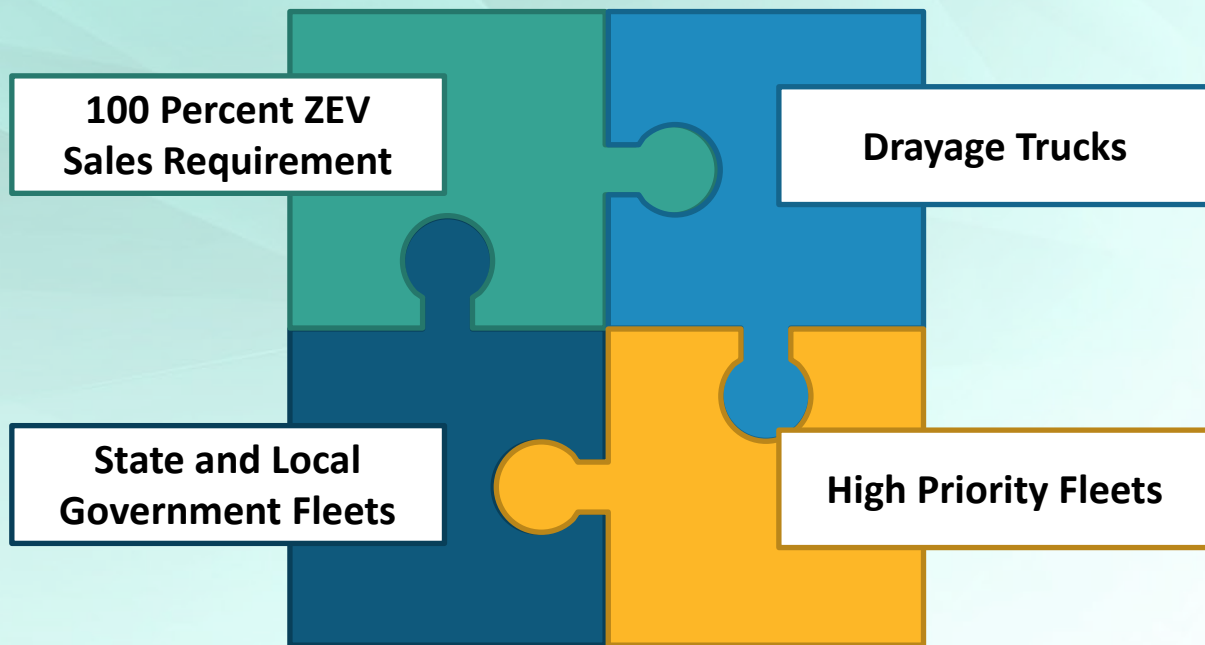
- Manufacturers to sell ZEVs in all vehicle classes as a percentage of total sales*
- Credit for pre-2024 sales
- 320,000 ZE trucks to California by 2035
- Board resolution setting 2035, 2040, and 2045 fleet goals





Regulation Summary

Advanced Clean Fleets Regulation Components



100 Percent ZEV Sales Requirement

Starting 2036, all Class 2b-8 vehicles sold into California must be ZEVs

- Provides certainty to the market and supply chain for manufacturers, fleets, infrastructure providers, service technicians, partner agencies, and local governments
- Expands market choice

Drayage Trucks Requirements

Applies to Class 7-8 on-road trucks operating at California's seaports and intermodal railyards

December 31, 2023

Registration required for legacy trucks

January 1, 2024

Newly added drayage trucks must be ZEVs

January 1, 2025

Must annually report mileage for trucks over 12 years

January 1, 2035

All drayage trucks must be ZEVs

- Legacy trucks may operate until the end of their useful life
- Must visit a regulated seaport or railyard at least once a year
- May use limited extensions

High Priority and Federal Fleets

Affected businesses

Fleets with 50+ vehicles,
including common
ownership and control

Fleets with >\$50 million in
annual revenue

Federal government fleets

Entities that hire or dispatch
fleets

Affected vehicles

Class 2b-8 vehicles

Off-road yard tractors

Light-duty delivery vehicles



Model Year Schedule Summary

January 2024

Registration required for
legacy trucks

January 1, 2024

Newly added
trucks must be
ZEVs or NZEVs

January 2025

Must annually
report mileage for
tractors over 12
years

January 1, 2025

ICE vehicles
removed after
useful life
exceeded

- Legacy trucks may operate until the end of their useful life
- May use certain exemptions and extensions
- ICE vehicle removals begin January 2025



Model Year Schedule Example

Legacy Truck Engine Year	18 years
2010	2028
2011	2029
2012	2030
2013	2031
2014	2032
2015	2033
2016	2034
2017	2035
2018	2036
2019	2037
2020	2038
2021	2039
2022	2040
2023	2041
2024	2042

- California fleet
 - All additions must be ZEVs
 - Legacy trucks removed after end of useful life
- Tractors
 - Earlier of 18 years or
 - End of year when odometer exceeds 800,000 miles
 - No less than 13 years
- Yard trucks and all other vehicles
 - 18 years

State and Local Government Requirements

2024-2026

50 percent of purchases
must be ZEV or NZEV

January 1, 2027

All purchases
must be ZEV or
NZEV

- Agencies in designated counties and divisions with 10 or fewer trucks exempt until 2027
- May use exemptions and extensions



Optional ZEV Milestone Phase-in

- Open to High Priority and State and Local Government fleets
- Must meet ZEV milestones as a percent of total fleet
- Flexibility to add new or used ICE vehicles meeting cleanest engine requirements

Zero-Emission Fleet Percentage	10%	25%	50%	75%	100%
Group 1: Box trucks, vans, 2-axle buses, yard trucks, light-duty package delivery vehicles	2025	2028	2031	2033	2035
Group 2: Work trucks, day cab tractors, 3-axle buses	2027	2030	2033	2036	2039
Group 3: Sleeper cab tractors and specialty vehicles	2030	2033	2036	2039	2042

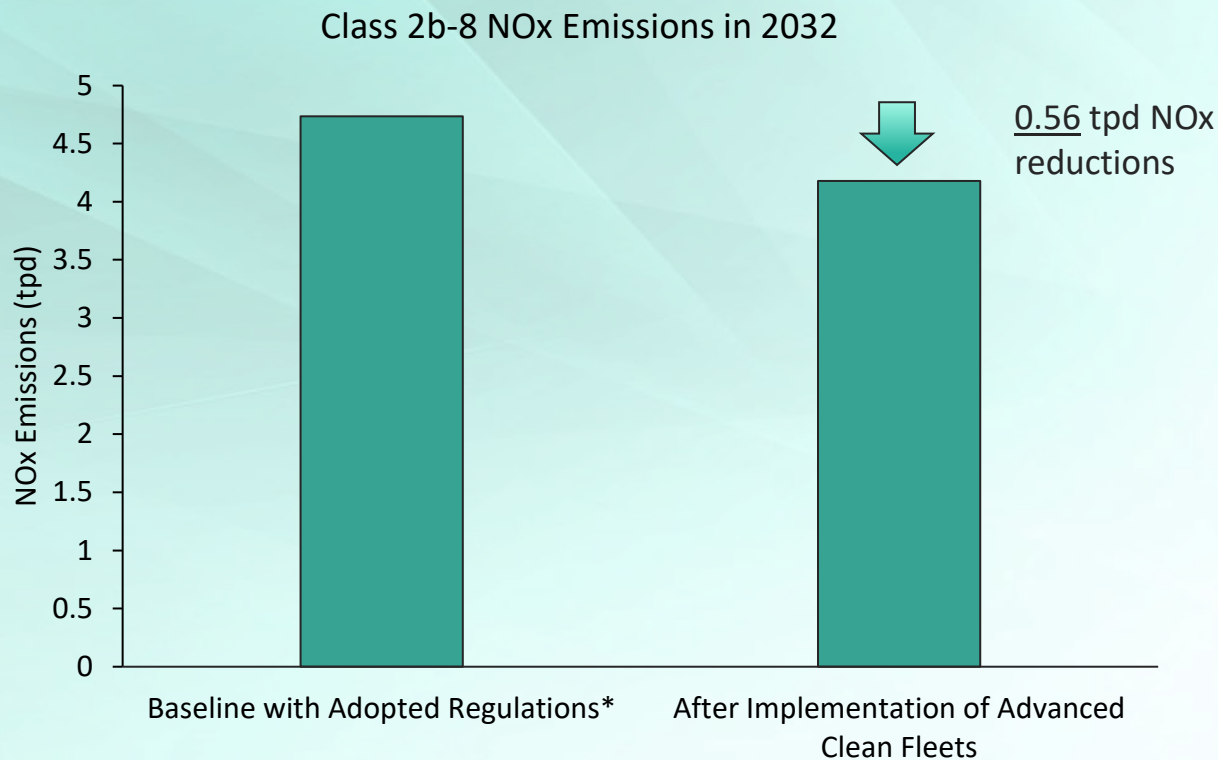
Provisions Summary

Provision	Summary
Vehicle Delivery Delay Extension	Remain compliant if ZEV order delayed
Infrastructure Delay Extension*	Remain in compliance up to 5 years for onsite ZEV infrastructure delays
ZEV Purchase Exemption*	Can buy ICE vehicle from CARB list or apply if not available in configuration needed
Daily Usage Exemption*	Can buy ICE vehicle if mileage or hours of ZEV not suitable for placement in the fleet
Mutual Aid Assistance*	Reserve 25% of fleet for use in mutual aid agreements
Waste and Wastewater Fleets*	More time for CNG trucks supporting waste diversion and biomethane production
Rental Vehicle Provision	Flexibility to address transient rental fleet vehicles
Five-Day Pass	Temporary pass to operate non-compliant trucks up to 5 days per year
Non-Repairable Vehicle*	Flexibility to purchase used replacement ICE vehicle in case of accident
Backup Vehicle Exemption*	Excludes vehicle operated less than 1000 miles per year
Intermittent Snow Removal Vehicle*	May purchase ICE vehicles until 2030
Transit Agency Exemption*	Excludes transit agencies and their maintenance vehicles until 2030

Regulation Summary

- Phase-in ZEVs over next 10 to 20 years
- Existing vehicles can operate their full useful life
- Public and high priority fleets can use ZEV Milestones Option
- NZEV count same as ZEVs until 2035 (except for drayage)
- Various provisions address circumstances beyond fleet owner's control

Expected Emissions Reductions in San Diego County





Other CARB Controls

CARB SIP Strategy Measures

On-Road

- Clean Miles Standard*
- On-Road Motorcycle Emissions Standards
- **Advanced Clean Fleets Regulation***
- **Zero-Emission Trucks**
- Enhanced Regional Emission Analysis in SIPs

Primarily Federally-Regulated

- In-Use Loco Regulation*
- Measures for Aviation Emissions
- Measures for OGV Emissions

Area Sources

- Consumer Products
- Zero-Emission Space & Water Heaters
- Pesticides: 1, 3-Dichloropropene

Off-Road Equipment

- **Zero-emission Forklift**
- Commercial Harborcraft*
- **Tier 5 Off-Road Engine Standard**
- Amendments to In-Use Diesel-Fueled Fleets Regulation*
- **Zero-Emission TRU Part II**
- Off-Road Zero-Emission Targeted Manufacturer Rule
- Clean Off-Road Fleet Recognition Program
- Spark-Ignition Marine Engine Standards
- **Cargo Handling Equipment**



Next Steps

Infrastructure Coordination

- Agency principles of coordination and cooperation:
 - Ensure equity
 - Communication
 - Share data and analyses
 - Joint stakeholder engagement
 - Joint planning and solicitations



CalSTA

Caltrans

DGS
GENERAL SERVICES

Implementation

- Fleet reporting and exemption process being developed
- Outreach materials include
 - Multiple factsheets
 - Video training
 - Hotline and email account for questions
- Truck Regulation Implementation Group meetings
 - Four workgroups focused on rule provisions, infrastructure, outreach, and border communities

Additional Resources

- ACF Webpage:
 - <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets>
- ACF Questions: zevfleet@arb.ca.gov
- ZEV Truckstop: <https://ww2.arb.ca.gov/our-work/programs/truckstop-resources/zev-truckstop>
- Diesel Hotline: 1-866-6DIESEL (1-866-634-3735)