



Proposed
Advanced Clean Truck Regulation

June 25, 2020

Today's Overview

- Background and Board direction from December 2019 hearing
- Assessing the EMA Proposal
- Staff's response to Board Direction
 - Increase zero-emission vehicle (ZEV) sales
 - Streamline large entity reporting
- Next steps

Synergistic Regulations Meet Targets

Advanced Clean Trucks

Goal: Foster and accelerate large-scale production of zero-emission trucks

Low-NOx Omnibus

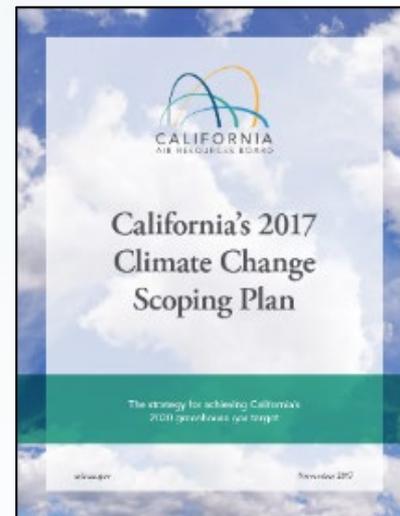
Goal: Ensure combustion-powered vehicles are as clean as possible

Zero-Emission Fleet Rules

Goal: Drive adoption of zero-emission vehicles everywhere feasible



Climate and Air Quality Needs



Advanced Clean Trucks Proposal

Manufacturer ZEV Sales	Large Entity Reporting
<ul style="list-style-type: none">• Must sell ZEVs as a percentage of annual sales	<ul style="list-style-type: none">• One time reporting in 2021• Vehicles, facilities, contracted vehicle services

Board Direction from Initial Hearing

- Increase the number of zero-emission trucks sold and deployed
- Accelerate benefits in disadvantaged communities
- Evaluate EMA proposal of 100% ZEV sales by market segment
- Work with industry to streamline the reporting requirement
- Expedite complementary zero-emission fleet rules
- Establish pathway to 2045 carbon neutrality
- Additional considerations



Assessing the EMA Proposal

EMA Proposal

- Identify specific segments and require 100% ZE sales and purchases
 - 2023 – All school buses and stepvan sales to municipalities
 - 2024 – All sales to public utilities and all yard tractor sales
 - 2025 – All stepvans, airport service vehicles, all shuttle bus sales
 - 2026 – All refuse trucks
 - 2027 – Concept continues for other segments

EMA Proposal Issues

- Cannot incorporate into manufacturer sales proposal
- EMA proposal puts all responsibility on fleets
- EMA acknowledges 100% in any sector not feasible
- Does not substantially increase vehicles deployed
- Impractical in certain applications
 - Drayage, pickups, vehicles with multiple configurations



Updated Proposal

How to Increase ZEV Sales

Diverse Universe of Class 2b-8 Vehicles

Class 2b-3



Class 4-8



Class 7-8 Tractors



Changes to Increase Early Requirements

- Bring requirements up one year
 - Manufacturers launching products before rule starts
 - Early compliance expected
- Include pickups in 2024 MY
 - Six different ZE pickups announced before 2024 MY
 - Multiple in Class 2b-3
- COVID-19 is not a reason to delay



Model Year (MY)	Class 2b-3	Class 4-8	Class 7-8 Tractors
2024	3%	7%	3%
2025	5%	9%	5%
2026	7%	11%	7%
2027	9%	13%	9%
2028	11%	24%	11%
2029	13%	37%	13%
2030	15%	50%	15%

Changes to Align with Port Goals

Increase Tractor Numbers

- Increase tractor sales starting 2026
- Directionally consistent with port's clean air goals
- Provide increased benefits to disadvantaged communities

Model Year (MY)	Class 7-8 Tractors
2024	3% 5%
2025	5%-7%
2026	7% 10%
2027	9% 15%
2028	11% 20%
2029	13% 25%
2030	15% 30%



Changes to Increase Requirements in Later Years

- Class 2b-3 – Increase requirements based on higher ZE pickup feasibility plus recent ZE van announcements
- Class 4-8 – Increase requirements after 2026 to smooth out ramp up

Model Year (MY)	Class 2b-3	Class 4-8
2024	3% 5%	7% 9%
2025	5% 7%	9% 11%
2026	7% 10%	13%
2027	9% 15%	13% 20%
2028	11% 20%	24% 30%
2029	13% 25%	37% 40%
2030	15% 30%	50%

Continue Ramp-up Past 2030

- Establish pathway to 2045 carbon neutrality goal
- Achieve 15% ZE fleet by 2035
- Aligns with San Pedro Bay Ports goal of roughly 17,000 ZE drayage trucks by 2035

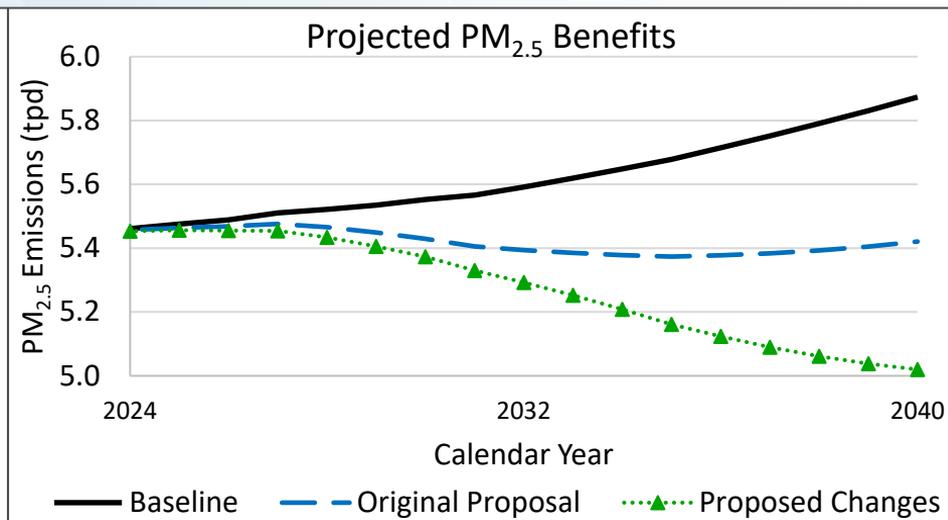
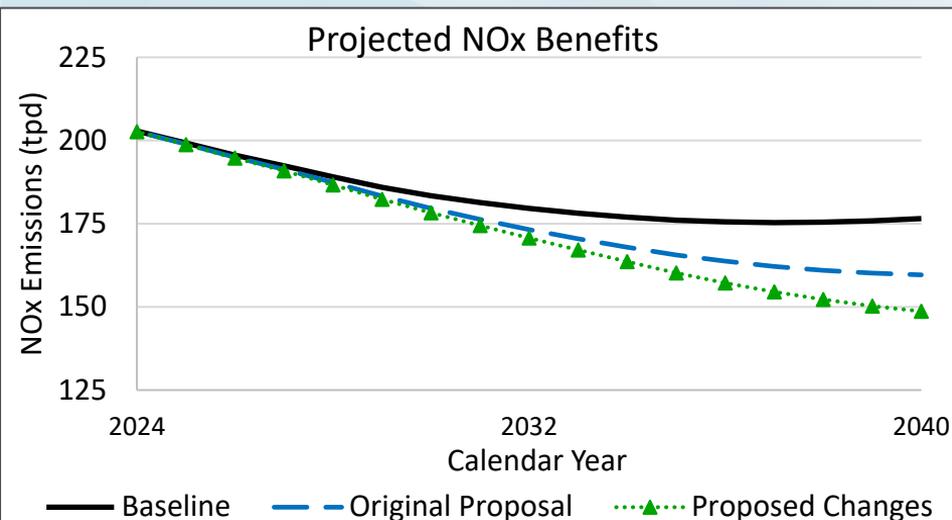
Model Year (MY)	Class 2b-3	Class 4-8	Class 7-8 Tractors
2024	3% 5%	7% 9%	3% 5%
2025	5% 7%	9% 11%	5% 7%
2026	7% 10%	13%	7% 10%
2027	9% 15%	13% 20%	9% 15%
2028	11% 20%	24% 30%	11% 20%
2029	13% 25%	37% 40%	13% 25%
2030	15% 30%	50%	15% 30%
2031	35%	55%	35%
2032	40%	60%	40%
2033	45%	65%	40%
2034	50%	70%	40%
2035+	55%	75%	40%

Other Changes to the Manufacturer ZEV Sales Requirements

- Extend plug-in hybrid (NZEV) credit generation to 2035
- Restructure credit retirement order
- Provide flexibility to manufacturers of small numbers of tractors
- Adjustments to Weight Class Modifiers
- Ensure sales counts are to ultimate purchaser in California
- Other streamlining and clarifications

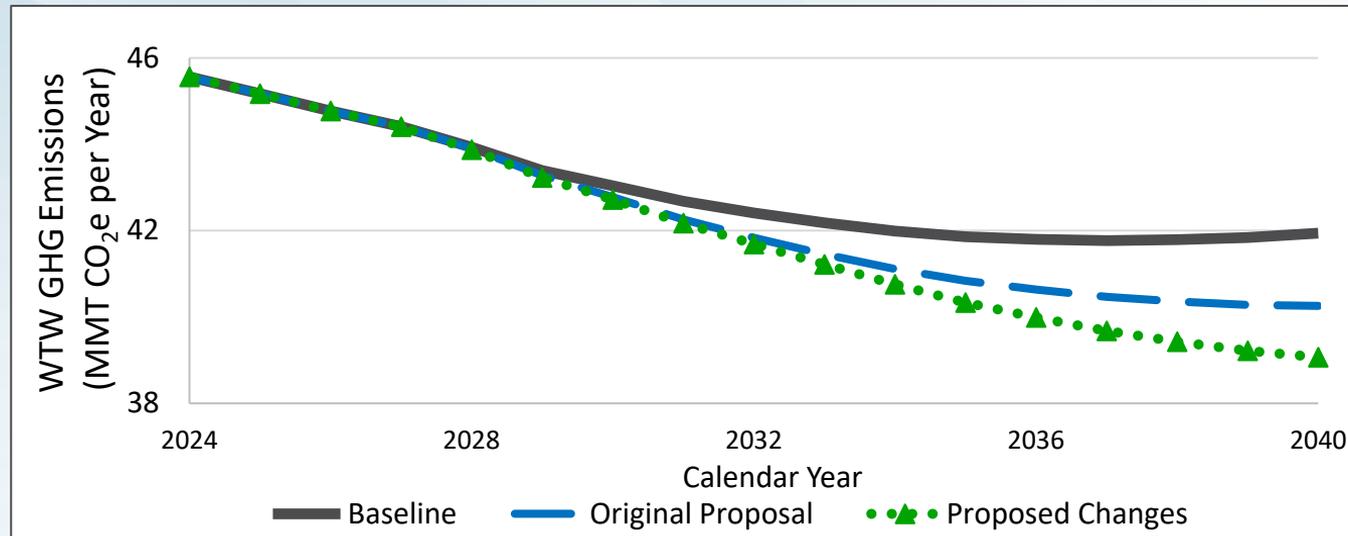
Updated NOx and PM_{2.5} Benefits

- NOx: 6.9 tons per day (tpd) by 2031, 27.9 tpd by 2040
- PM_{2.5}: 0.24 tpd by 2031, 0.85 tpd by 2040
 - Includes reduced brakewear PM



Projected GHG Benefits

- 17.9 million metric tons cumulative reduction through 2040
 - Only benefits beyond Phase 2 GHG rule requirements



Additional Benefits

- \$5.9 billion in estimated net savings to California
- Additional \$8.9 billion in estimated health benefit savings
 - Avoided premature mortality, emergency room visits, hospitalizations, lost workdays
- Net creation of roughly 7,500 jobs
- Reduce energy use and petroleum dependence
- Other societal benefits



Updated Proposal Streamlined Fleet Reporting

Changes to Fleet Reporting

- Limited survey questions to entities that own trucks
- Removed all questions about facilities without vehicles
 - Get facility location, type and truck traffic data with contractor survey and voluntary participation
- Fleet size threshold reduced from 100 to 50 vehicles
- Streamlined and clarified questions throughout

Changes to Vehicle Reporting

- More flexibility in determining data collection period
- More clarity and examples on how to use existing data
- Removed light-duty vehicle questions
- Fleet use and location is most critical information needed
 - Necessary to match fleet needs with available ZEVs
 - Determine potential benefits to local communities
 - Facilitate utility infrastructure planning and build-out

Environmental Analysis

- Draft Environmental Analysis (EA) completed
- Released for 45-Day public comment period
 - October 25, 2019 to December 9, 2019
- Final EA and Written Responses to Comments
 - Released in June 2020

Staff Recommendation

- Approve Resolution 20-19 which includes the following components:
 - Approve written responses to environmental comments
 - Certify the Final EA, and making the required CEQA findings
 - Adopt the Proposed Regulation and direct the Executive Officer to submit the regulation to U.S. EPA for inclusion in the California SIP
 - Recommend staff take steps to achieve a full transition to zero-emission vehicles to meet the following goals
 - 2035 – For drayage trucks at ports and railyards
 - 2040 – For refuse trucks, first/last mile delivery vehicles, and buses
 - 2040 – For utilities and government fleets (including NZEVs)
 - 2045 – For all other vehicles where feasible
 - Work with sister agencies on infrastructure and workforce development