Recommendations on CARB's
Advanced Clean Fleets Regulation from the ACF Coalition

A coalition of Environmental, Labor, Community & Environmental Justice NGOs
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I. Background

The ACF rule would require certain medium- and heavy-duty (MHD) vehicle fleets to transition to zero-emissions. The rule is one of the most direct tools for driving the transition to zero emission trucks and therefore a critical opportunity for tackling California's freight pollution, concentrated in low-income communities of color.

Our concern: CARB staff's draft regulation falls well short of achieving the goals included in Gov. Newsom's EO N-79-20, CARB's Resolution 20-19 (ACT), and CARB's 2020 Mobile Source Strategy. Under the proposed rule and including the ACT, 50% of the MHD vehicles on the road in 2045 would still be powered by polluting combustion engines, far from achieving the Governor's climate target of a 100% MHD truck fleet by 2045. Also as proposed, the ACF rule will leave substantial, beneficial and achievable NOx and PM2.5 emission reductions on the table that are necessary for achieving federal and State clean air requirements and reducing disproportionate pollutant exposure in disadvantaged communities.

II. Our Recommendations: The Board should adopt a modified version of the Accelerated ZEV Transition Alternative (aka "Alternative 2") set forth in the Initial Statement of Reasons (ISOR).

1. Require 100% ZEV sales by 2036 (instead of 2040).
2. Take 2 actions to further reduce toxic emissions from Class 7 & 8 Tractors
   a) Move Class 8 Sleeper Cabs from Group 3 to Group 2 vehicles in the High Priority Fleets Rule so that all Class 7 and 8 tractors are subject to the same transition schedule beginning 2027 (instead of 2030). This first ZEV milestone date requires a fleet to have 10% of its vehicles as ZEV.
   b) Lower the High Priority Fleet threshold for Class 7 & 8 tractors from 50 to 10 trucks.

III. Benefits of Our Recommendations:

The Initial Statement of Reasons (ISOR) for the proposed rule demonstrates that the Accelerated ZEV Transition Alternative (Alternative 2), which largely mirrors our recommendations, would significantly increase the number of ZE trucks on the road by 230,000 in 2050, and would provide massive health and economic benefits including:

- Over $34 billion in *additional* health benefits
- An *additiona*l 60% reduction in NOx and PM2.5 emissions.
- Over 3,200 *additional* avoided premature deaths
- A 54% *greater* reduction of greenhouse gas emissions.
- $10 billion in additional Net Benefit Savings, a 21% increase
- Net cost savings to fleet owners *increase* by 2%

Cumulative Benefits by 2050				
	Proposal	ISOR Alternative 2	Difference	% Difference
Net Fleet Cost Savings ($billions)	$ 22.1	$ 22.5	$ 0.4	2%
Health Benefits Savings ($billions)	$ 57.8	$ 92.1	$ 34	59%
Net Benefit Savings* ($billions)	$ 46.9	$ 56.7	$ 10	21%
Social Cost of Carbon Reductions ($billions) at 3% discount rate	$ 26.0	$ 37.4	$ 11	44%
NOx Reductions (tons)	418,938	673,970	$ 255,032	61%
PM 2.5 Reductions (tons)	8,627	13,710	$ 5,083	59%
GHG Reductions (MMT CO2e)	307	472	$ 165	54%
Avoided Cardio Pulmonary Deaths	5,517	8,791	3,274	59%
Avoided ER Admits for asthma	2,537	4,056	1,519	60%
Increased ZEVS by 2050				
Increased ZEVs	1,580,000	1,810,000	230,000	15%
* Includes costs, savings, health benefits and tax / fee reductions.				

Figure 80: Statewide Population Forecast over Time under Accelerated Zero-Emission Vehicle Transition (Alternative 2)

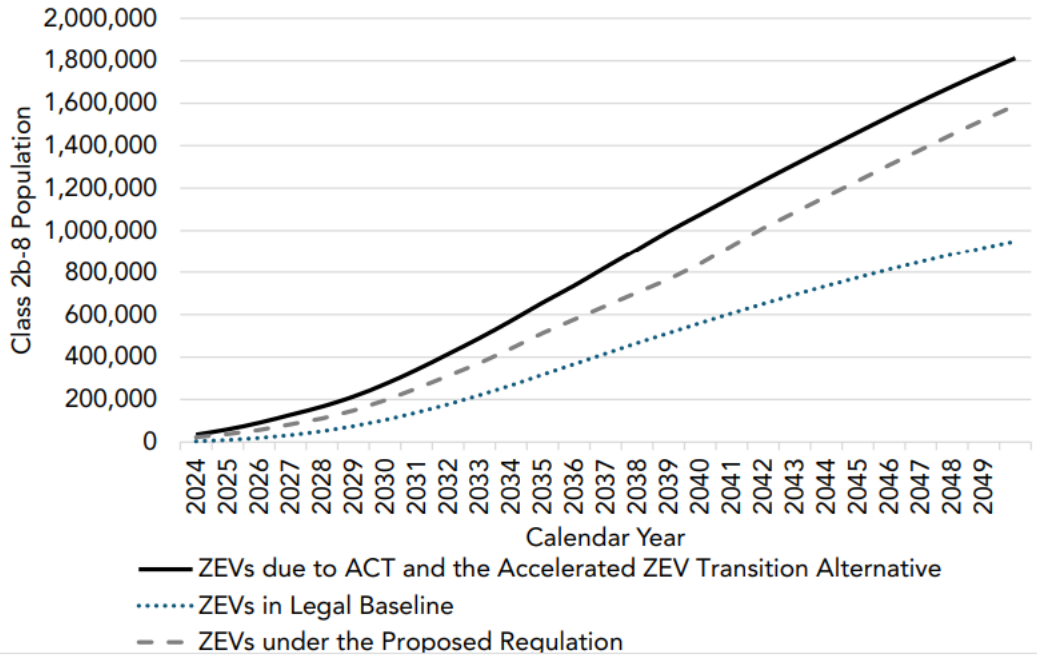
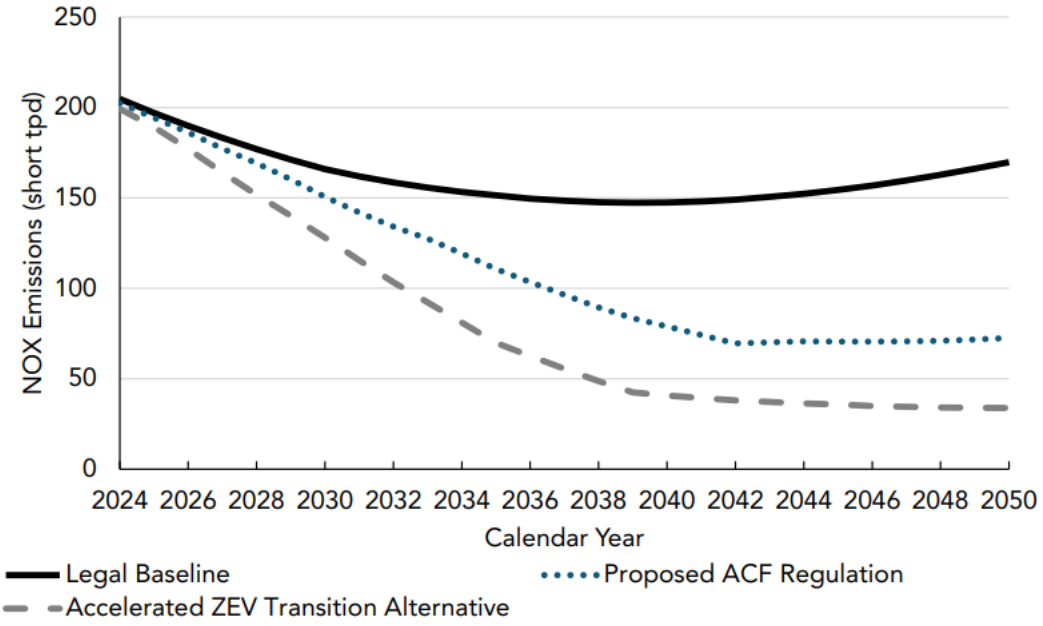


Figure 81: Projected NOx Emissions under Legal Baseline, Proposed ACF Regulation, and Accelerated Zero-Emission Vehicle Transition (Alternative 2)



IV. Supporting Reasons for our Recommendations

1. Accelerate the date for 100% ZE Sales from 2040 to 2036.

- 100% ZE sales by 2036 is necessary.
    1. Necessary to meet California climate mandates by 2045.
    2. The proposed rule impacts only 12% of Class 2B-3 pick-ups and vans until 2040. Accelerating the 100% sales requirement by 4 years will capture more of these vehicles, which represent 64% of all MHD trucks and are the easiest to electrify.

- 100% ZE sales by 2036 is feasible.
    1. **ZEV Vehicles are available** - Already have 144 HVIP-approved ZE models, including models for each major segment of the MHD vehicle market. (See ISOR Appendix J). We continue to see major new announcements of vehicles, manufacturing and battery factories, 100% ZEV commitments, etc. on a regular basis.
    2. **OEM Production Capacity** - is ramping up and will meet the market needs and regulation requirements. Both legacy and new entrant OEMs either already have or are actively constructing manufacturing plants, assembly lines and battery factories to have more than sufficient capacity to meet California's requirements.
    3. **The total cost of ownership (TCO) for ZEVs are very favorable** - Multiple studies, including CARB's, show that many categories of MHD vehicles have a lower TCO than the comparable ICE vehicles today and nearly all do so by 2030. The up to $40,000 federal incentive per vehicle from the IRA will further improve the TCO. And this incentive will be available through 2032.
    4. **Charging Infrastructure** - Financing and programs to fund and install charging infrastructure to meet the needs of depot-charged MHDs is already in place. Multiple federal, state, utility and private charging infrastructure programs are initiating and give us high confidence that publicly available chargers for MHD vehicles will be in

place to meet remaining needs. The up to $30,000 federal incentive for each charger from the IRA will further accelerate charger installations. This incentive will be available through 2032.

5. **Large orders are already being placed** – In addition to the many large orders already placed by for example Amazon, Fedex and DHL for delivery vehicles, large orders are now being placed for Class 8 Tractors e.g. Sysco's letter of intent for 800 Freightliner eCascadias Class 8 Semis from Daimler by 2026 and beginning this year; Pride Group's order of 250 ZEVs from Daimler including 200 eCascadias.

2. Move Sleeper Cab Tractors from Group 3 to Group 2.

Table 2: High Priority and Federal Fleet ZEV Phase-In Schedule

Group	Percentage of Fleet that Must be ZEVs	10%	25%	50%	75%	100%
1	Box trucks, vans, two-axle buses, yard trucks, light-duty delivery vehicles	2025	2028	2031	2033	2035
2	Work trucks, day cab tractors, three-axle buses	2027	2030	2033	2036	2039
3	Sleeper cab tractors and specialty vehicles	2030	2033	2036	2039	2042

- This change is necessary:
  1. Many sleeper cabs are actually in short- and regional-haul uses. Current proposal could create a perverse incentive to build out these short- and regional-haul fleets with sleeper cabs to avoid earlier deadlines.

- This change is feasible:
  1. Reasonable to expect ZE Sleeper Cabs by 2027 – Today, there are no ZE sleeper cabs in the US, but nearly all major OEMs of tractors now have electric day cabs on the road. As soon as these vehicles can support about 500 miles of range, they are suitable for long-haul and it is relatively straightforward to add a sleeper cab to these vehicles. Moreover, as noted above, not all sleeper cabs are put into long-haul service.
  2. Moving sleeper cabs into Group 2 also does not mean that 10% of fleet-operated sleeper cabs must be ZE. Many fleets will still have the flexibility to decide which of their Group 2 trucks to electrify and may choose not to prioritize the electrification of sleeper cabs.
  3. Infrastructure to support long-haul applications is coming – Sufficient national charging infrastructure will be in place by 2027 to meet the needs of the initial tranche of long-haul ZEVs. (See the National Charging Infrastructure to Support Long-haul Operations section in the infrastructure document here: Workshop Comments Log (ca.gov)) # 164. In addition, the Megawatt Charging System (MCS) standard will be in place beginning in 2024 and can charge a fully loaded Class 8 long-haul Semi Truck in 30 minutes.
  4. Even for long-haul applications, the TCO of these high mileage ZEVs is very compelling due to especially high fuel and maintenance cost savings which will drive purchase of these vehicles. Their increasing adoption will enhance demand for charging infrastructure. A UC Berkeley study projects that the TCO for a Class 8 ZEV day cab will be half of that for a diesel by 2035. CARB estimates that the up-front cost difference for a Class 8 BEV day cab compared to a diesel is

only about 25% in 2025 when including the $40,000 federal IRA incentive. The BEV's cost is 20% lower than the diesel by 2030. By 2035, a sleeper cab is $11,000 or 7% less expensive up front without any federal incentive.

3. **Lower the minimum fleet size from 50 to 10 for Class 7 & 8 Tractors in the High Priority Fleets part of the rule**
    - A lower fleet threshold for tractors is necessary
        1. Tractors only account for 12% of MHD vehicles but nearly 50% of NOx. 50% of the trucks regulated in the High Priority Fleets part of the rule are tractors. Lowering the fleet size to 10 will reduce NOx and PM 2.5 emissions by an additional 16% to benefit everyone, but especially people living near high diesel traffic zones such as ports, highways and warehouses.
        2. It is not reasonable to apply the same threshold for fleets of delivery vans and smaller trucks to fleets of large tractors. The relative sizes of these operations are much different, and 10-50 tractors is a large capital investment representing a much larger business concern than fleets with 10-50 smaller trucks.
        3. A lower threshold for tractors is also critical to help addressing continued abuse of misclassification of drivers in fleets from 10-50 that are not protected by the "ownership and controlling interest" language in the proposed ACF rule. An initial analysis of The Division of Labor Standards Enforcement actions produced a list of fourteen companies in the fleet size range of 10 – 50 vehicles that had Order, Determination or Award (ODA) actions representing $6,380,414 in stolen wages and illegal deductions.

    - A lower fleet threshold is feasible
        1. It will not harm small fleets and those of "independent owners and operators," since these fleets typically have 5 or fewer vehicles. (See the labor letter to Chair Randolph here: Workshop Comments Log (ca.gov) #167.)
        2. Mid-size fleets will not be economically disadvantaged – Even if the fleet relies on purchasing used trucks, the TCO for buying a new electric day cab is actually lower than that for a comparable used diesel. So small fleets and small owner operators accustomed to only buying used diesels will experience lower TCO costs by buying a new electric truck.