FAQ on EPA Final Rule: Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles – Phase 3

Q 1. What is the new EPA Phase 3 rule?

A On March 29, 2024, the EPA announced the Phase 3 rule that sets aggressive standards to reduce greenhouse gas emissions from heavy-duty (HD) vehicles. The Phase 3 rule requires vehicle manufacturers (OEMs) to convert an annually increasing percentage of their total vehicle sales to zero-emission vehicles (ZEVs) over model years 2027 through 2032 – which in turn will result in a reduction of diesel product availability. The new standards apply to HD vocational vehicles (such as delivery trucks, refuse haulers, public utility trucks, transit, shuttle, school buses, etc.) and tractors (such as day cabs and sleeper cabs on tractor-trailer trucks).

Q 2. What is ATD's position on the final rule?

A ATD is opposed to EPA's final Phase 3 GHG rule because it will have unprecedented negative impacts on American commercial trucking, large swaths of U.S. businesses, customers and consumers. The rule will likely *increase* overall emissions by forcing commercial vehicle customers to hold on to existing fleets or purchase used trucks. The rule is unachievable due to the many challenges including technological feasibility, affordability, reliability, performance, and the lack of commercial charging infrastructure.

Q 3. Why did the EPA initiate this rulemaking?

A Phase 3 completes the Administration's EPA's Clean Trucks Plan for reducing greenhouse gas emissions and other harmful air pollutants from heavy-duty trucks through a series of rulemakings. The Clean Trucks Plan represents the most aggressive and costly set of EPA emissions regulations ever for the on-road commercial vehicle sector. The Clean Truck Plan includes 1) the EPA's recently finalized light- and medium-duty vehicles final rule for MY 2027-2032 (which covers Class 2b and 3 trucks), 2) the 2023 heavy-duty NOx final rule, and 3) the greenhouse gas standards set by the Phase 3 rulemaking.

Q 4. How does this rulemaking impact dealerships?

A The Phase 3 rule directly regulates OEMs and the HD vehicles they build and sell but significantly impact dealerships in three ways:

- Influences the types of engines and HD vehicles dealers can sell through requirements on OEMs to convert an annually increasing percentage of their total vehicle sales to zero-emission vehicles (ZEVs).

While the rule does not explicitly dictate the inventory dealerships can maintain, the requirements on the OEMS will directly impact dealership allocations. OEMs must evolve their fleets to comply, gradually favoring ZEVs and PHEVs over ICE vehicles, this will impact the availability of vehicles to dealerships and will result in less diesel product availability.

- Continues the OEM Average, Banking, and Trading Program to provide OEMs greater flexibility in the types of engines and vehicles they can sell while remaining in compliance with the rule.

To allow OEMs flexibility in achieving emission standards as they increase stringency, EPA has an averaging, banking, and trading (ABT) program through which OEMs can earn credits for engine families with emission limits that fall below EPA's emission standards. OEMs can use credits to offset higher emission levels from vehicles in the same averaging set such that the averaging set meets the standards on "average", "bank" the credits for later use, or "trade" the credits to another OEM. Credit multipliers are available under this program to increase the credits an OEM can earn for advanced technology vehicles (plug-in hybrid, all-electric, and fuel cell).

The ABT program is incredibly important to OEMs and dealerships because it directly impacts how many of each type of engine family (diesel, hybrid, electric, fuel cell etc.) an OEM can sell. Generally speaking, OEMs that can best take advantage of the ABT program through a mix of emission technologies and compliance strategies fare better economically. OEM ABT compliance strategies will likely restrict the type and number of vehicles that dealers can sell to customers. For example, OEMs may initiate product "blackouts" to eliminate the availability of diesel vehicles and push the sale of alternative powertrains to meet EPA's targets.

The final rule retains the existing ABT regulatory scheme that allows OEMs to meet the standards on average within each weight class of their fleet rather than by individual vehicle. EPA is also retaining ABT flexibility that allows OEMs to continue to earn advanced technology credit multipliers for PHEV and BEV technologies through MY 2027. OEMs can transfer ABT credits from class to class. For example, this allows excess MHD credits to be used to offset shortages in a HHD averaging set. Lastly, **EPA is limiting the circumstances when multiplier credits may be used in MY 2027 through 2029 and eliminates the availability of credit multipliers for use in MY 2030 and later**. Ultimately, these ABT program requirements mean that OEM compliance with the final rule will **get much more challenging beginning in 2030** as the availability of ABT credits is removed and the selection of vehicles available to sell to customers is expected to drop off drastically.

- Sets durability and warranty requirements on new emissions technologies which will likely impact vehicle cost and funnel vehicles to dealership service shops.

Durability and warranty requirements set in the final rule allow for greater confidence that new vehicle technologies, like batteries, are durable and support EPA's emissions goals while meeting customer's expectations for driving range, capacity, power, and operability for a period of use comparable to that of a conventional diesel vehicle. Generally speaking, requirements that improve the durability and warranty of the vehicle assist dealerships in driving business to their service shop for warranty work, however, are expected to increase the cost of the vehicles.

The final rule 1) requires OEMs to provide a battery state-of-health monitor for BEVs and PHEVs[1]; and 2) includes new warranty requirements for ZEV batteries and associated electric powertrain components (e.g., fuel-cell stack, electric motors, and inverters) and clarifies how existing warranty requirements apply to PHEVs.

1. EPA is not finalizing durability monitoring requirements for FCEV because the technology is still emerging in HD applications, and no appropriate metric currently exists.

Q 5. What is the projected total cost of ownership (TCO) for an electric vehicle under the rule?

A ATD has had ongoing concerns regarding the cost differentials the EPA has been utilizing when comparing an electric commercial vehicle to a similar diesel truck. In the proposed rule they were stating that an electric class 8 truck will only cost $15,000 more than a diesel class 8 in a few years when we know the current price differential is roughly $230,000. We remain very concerned with the EPA's vehicle cost projections they are utilizing for electric commercial vehicles in a few short years to in part justify this rule. EPA is claiming the total cost of ownership for electric commercial vehicles is cheaper than diesel in all segments. See the chart below.

Table ES-9: MY 2031 Estimated Average Per-Vehicle Purchaser Upfront Cost and Annual Savings Difference Between BEV/FCEV and ICE Technologies for the Program (2022$)[a,b,c]

Regulatory Group	Upfront Incremental Vehicle Cost Difference (Including Tax Credits)	Upfront EVSE[d] Costs on Average (Including Tax Credits)	Total Incremental Upfront Costs on Average Including Taxes and Tax Credits	Annual Incremental Operating Costs on Average	Payback Period (year) on Average
Light Heavy-Duty Vocational Vehicles	–$10,300	$11,700	$1,500	–$3,700	2
Medium Heavy-Duty Vocational Vehicles	–$5,600	$15,300	$9,700	–$5,100	3
Heavy Heavy-Duty Vocational Vehicles	–$11,700	$46,200	$34,500	–$10,500	4
Short-Haul (Day Cab) Tractors	–$1,500	$5,900	$4,400	–$5,500	2
Long-Haul (Sleeper Cab) Tractors	$22,400	$0	$22,400	–$8,300	5

[a] Undiscounted dollars
[b] Values rounded to the nearest $100 for values above $100, and nearest $10 for values below $100.
[c] The average costs and payback periods represent the sales weighted average across the regulatory group, for example the first row represents the average across all LHD vocationals vehicles.
[d] Electric Vehicle Supply Equipment.

Q 6. How is the final rule different from the proposed rule?

A The final rule eases near-term standards for all vehicle categories, meaning the standards are less stringent in MYs 2027-2030 than proposed. This provides more time in the early model years of the program for the development of vehicle technologies and deployment of charging and refueling infrastructure. However, standards for some vehicle classes are tightened in later years, and overall emission reductions are expected to be similar. The table below summarizes a selection of adoption rates from the proposed rule and the final rule. **Keep in mind that less than 1% of commercial vehicle sales today are ZEVs.**

EPA - GHG Phase 3 Proposed to Final						
Subcategory	**MY 2027**	**MY 2028**	**MY 2029**	**MY 2030**	**MY 2031**	**MY 2032**
LHD vocational	22%→17%	28%→22%	34%→27%	39%→32%	45%→46%	57%→60%
MHD vocational	19%→13%	21%→16%	24%→19%	27%→22%	30%→31%	35%→40%
HHD vocational	16%→0%	18%→0%	19%→13%	30%→15%	33%→23%	40%→30%
Day Cab Tractors	10%→0%	12%→8%	15%→12%	20%→16%	30%→28%	34%→40%
Sleeper Cab Tractors	0%	0%	0%	10%→6%	20%→13%	25%

The final ABT program amendments, as referenced previously, include flexibilities that will attempt to assist manufacturers in meeting the standards in the early years of the program while preserving incentives for early adoption of advanced technologies.

Lastly, EPA committed to 1) actively engage with stakeholders and monitor OEM compliance, infrastructure, and the supply chain; and 2) issuing periodic reports reflecting information collected throughout the lead-up to and during implementation of the Phase 3 program. Based on these reports, the EPA may decide to issue guidance documents, initiate a future rulemaking to consider modifications to the Phase 3 rule, or make no changes to the program. If EPA fails to prepare the reports, or fails to act based upon any report, it is not clear whether stakeholders can use judicial challenges to require EPA to act. A comprehensive off ramp which industry stakeholders and ATD asked for should the OEMs fail to meet the established targets was rejected by the EPA.

Q 7. How is the Phase 3 rule different from the California Air Resources Board's (CARB) Advanced Clean Truck Rule?

A California Air Resources Board (CARB) Advanced Clean Trucks (ACT) Rule has two components including a OEM sales requirement and a reporting requirement.

- ACT Sales Requirements: OEMs are required to sell ZEVs at an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b – 3 truck sales, 75% of Class 4 – 8 straight truck sales, and 40% of truck tractor sales.
- ACT Reporting Requirements: Large employers are required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, are required to report about their existing fleet operations. CARB plans to use this information to identify strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

While there is some overlap in the objectives of both regulations, CARB's mandates begun in 2024 and are more stringent, necessitating a larger proportion of ZEV sales annually compared to the EPA's standards. Further, EPA requirements do not have reporting requirements for employers or fleets.

In 2020, 15 states and the District of Columbia signed a Multi-State Medium- and Heavy-Duty Zero-Emission Vehicle Memorandum of Understanding (MOU) to align states with the goals of the ACT rule. So far, 10 states have explicitly adopted CARB's ACT regulation under § 177 of the Clean Air Act (Colorado, Maryland, Massachusetts, New Jersey, New Mexico, New York, Oregon, Rhode Island, Vermont, Washington).