



Navigating the Future: Upcoming Regulations Will Transform Heavy-Duty Trucking - Part 2: US Regulations

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US Regulations: Paving the Way to Zero Emissions

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EPA Phase 3 and California's ACT and ACF Regulations

Across the Atlantic, the United States is also ramping up efforts to decarbonize the heavy-duty transportation sector. The Environmental Protection Agency (EPA) Phase 3 regulations, set to begin in 2027, will impose stricter emission controls on heavy-duty vehicles, aiming for substantial cuts by 2032.

In parallel, California's Advanced Clean Fleets (ACF) and Advanced Clean Trucks (ACT) regulations are pushing for a full transition to zero-emission vehicles (ZEVs) by 2045. These regulations set phased targets for different fleet categories, with key milestones including:

US Targets:

- **2024:** ACT mandates increased sales of ZEVs; ACF requires high-priority fleets to transition to ZEVs.
- **2027:** EPA begins implementing stringent GHG standards for heavy-duty vehicles.
- **2028:** Further reduction in GHG emissions across heavy-duty vehicles and engines.
- **2035:** ACT phases out most gas- and diesel-powered heavy-duty trucks; ACF mandates 100% ZEV for drayage, government, and last-mile delivery fleets.
- **2040:** ACF requires refuse, local buses, and utility fleets to be 100% ZEV.
- **2045:** ACT and ACF target 100% ZEV for all heavy-duty vehicles and various fleet types.

These regulations are part of a broader strategy to combat climate change and improve air quality, particularly in regions with high levels of pollution.

Implications for the Industry

The combined impact of these regulations will drive significant changes in the heavy-duty trucking industry. Manufacturers and fleet operators will need to adopt new technologies, such as plug-in hybrids and fully electric vehicles, to comply with the stricter standards.

Conclusions

The upcoming environmental regulations in the US represent as in EU a decisive

shift towards a greener, more sustainable heavy-duty trucking industry. By setting ambitious CO2 reduction targets and mandating the transition to zero-emission vehicles, these regulations will significantly impact how trucks are designed, manufactured, and operated in the coming decades.

For fleet operators, the adoption of technologies like plug-in hybrids will be crucial in navigating this transition. These vehicles offer a flexible and cost-effective solution that meets regulatory requirements while maintaining the operational capabilities essential for long-haul and demanding transport routes.

As the regulatory landscape continues to evolve, staying informed and proactive will be key to ensuring compliance and capitalizing on the opportunities presented by these new standards.

References

- [**California Air Resources Board \(CARB\).** "Advanced Clean Fleets Regulation." 2023.](#)