

**COMMENTS BY THE
ADVANCED ENGINE SYSTEMS INSTITUTE (AESI)
ON EPA’S PROPOSED RULE ON REVISED 2023 AND LATER MODEL YEAR
LIGHT-DUTY VEHICLE GREENHOUSE GAS EMISSION STANDARDS
DOCKET ID. NO. EPA-HQ-OAR-20210208**

September 27, 2021

AESI is an association of some of the world’s leading manufacturers of clean vehicle technology including emission control, engine efficiency and electric propulsion technologies. The U.S. economy has benefited in the hundreds of thousands of jobs created by clean technology suppliers who have located plants in the US to respond to the need established by environmental standards. From 2012 to 2020, the U.S. motor vehicle supplier industry was the fastest growing domestic manufacturing sector.

Over the past 50 years, U.S. technology leadership has been based upon stringent and predictable standards allowing domestic suppliers to establish competitive advantage through the early adoption and optimization of technologies on vehicles. The 2012 GHG standards allowed suppliers to rapidly introduce new technologies to the market. Subsequently, when EPA conducted their mid-term review, the pace and breadth of technology options for compliance grew and cost reductions exceeded expectations. The decision to weaken GHG standards in 2018 have left many advanced technologies on the shelf and put the US behind other leading automanufacturing regions like Europe and China where CO₂ standards accelerated.

AESI supports EPA’s reconsideration of the light-duty GHG standards through MY 2026 and the Administration’s commitment to promulgate standards for MY2027 and beyond. Suppliers rely on long term regulatory certainty to justify their investments that will allow the US to meet our national climate objectives and ensure the creation of high quality U.S. jobs. We agree with EPA’s assessment that the majority of the improvements through MY 2026 are achievable through broader deployment of existing technologies already available for combustion engines

and vehicles with hybrid and fully electrified powertrains. Performance based regulations are a proven method for meeting environmental goals through a diversity of technology solutions.

Regarding some of the critical issues raised by the NPRM, AESI would offer the following comments:

1) Available Advanced Technologies

There are numerous, robust technologies whose costs have declined and which remain available for deployment such as were highlighted by EPA in the 2020 Trends Report. AESI believes that vehicle manufacturers are well positioned to comply with the Preferred Proposal (38.2 mpg real world average) proposed by 2023-2026 LD GHG standards.

2) The Potential of Advanced Hybridized Powertrains

Hybridized powertrains are an obvious technology to be further exploited as they are presently only deployed on roughly 7% of vehicles.

Current popular hybrid models reduce CO₂ broadly by an average of about 30% while employing batteries of only 1 to 2 kWh. The latest new generation hybrids continue to show further efficiency improvements as they incorporate the latest IC engine, battery, electric motor and powertrain developments. Specific new generation MY2021 hybrids have shown an ability to reduce CO₂ by as much as 70% compared to the previous vehicle generation.

As hybrids do not rely upon local grids, their benefits apply equally across all 50 U.S. states making hybridization an ideal technology to ensure the most efficient legacy fleet possible.

3) Advanced Technology Multiplier Credits

EPA has recognized that advanced ZEV technologies have been around for many years and are no longer new. As a result, the 2012 midterm review and subsequent SAFE LD GHG rules phased out advanced technology multiplier credits for PHEVs, BEVs and FCEVs in MY 2022. The current multipliers provided for advanced technologies do not reflect actual in-use CO₂ reduction benefits and therefore ultimately result in fewer advanced technology vehicles offered in the market.

The numerous EV production commitments by OEMs suggest that the continued extended use of multipliers could reduce technology introduction for ICE, electrified

and electric powertrain, while having minimal cost or environmental impact before they are fully phased out in MY 2025.

4) Off-Cycle Technologies

EPA has proposed to increase the off-cycle credit cap from 10 g/mile to 15 g/mile.

Off-cycle technologies are EPA evaluated technologies which are found to represent real-world CO₂ reductions for vehicles under real world operation. Therefore, they should be further recognized to drive down CO₂ emissions by all technological means. A pathway should be expanded to allow vehicle manufacturers **as well as technology suppliers** to document CO₂ reduction performance and obtain off-cycle technology menu listings and credit values. These additional technologies are likely to be increasingly needed between 2023 and 2035 to achieve CO₂ reduction goals.

AESI fully supports the retention of off-cycle technology credits and the increase in the effective cap from 10 g/mile to 15 g/mile. Unlike credit multipliers, which do not represent additional technology deployment, off-cycle credits are awarded only when a technology's real-world benefits are validated and the technology is deployed. AESI strongly urges EPA to implement a pathway for technology suppliers to apply for conditional off-cycle technology credits that are verified in the real world. This supplier program could be modeled on that included in the California framework with 5 OEMs.

5) Conclusion

AESI is committed to working with EPA toward a technology neutral net-zero carbon transportation future. We enthusiastically support the standards proposed in this MY 2023-2026 NPRM, contained in EPA's Preferred Alternative. AESI members look forward to working with EPA toward the final adoption of these standards and the proposal of post MY2026 long term standards that ensure U.S. technology leadership, investment and job creation.

Contact: Patrick H. Quinn, Executive Director, AESI

Email: Pquinn@theaccordgroup.com