

Advanced Clean Cars Midterm Review

IN THIS SECTION

When the California Air Resources Board (CARB or Board) adopted the Advanced Clean Cars (ACC) program in 2012, the Board committed to conduct a comprehensive review of three elements of the program - the zero-emission vehicle (ZEV) regulation, the 1 milligram per mile (mg/mi) particulate matter (PM) standard, and the light-duty vehicle greenhouse gas standards for 2022 and later model years. The Board affirmed Staff's recommendations at its March 2017 board hearing.

Coordinated Review

A midterm evaluation (MTE) of the light-duty vehicle greenhouse gas standards for 2022 through 2025 model years was also conducted at the national level and CARB staff collaborated with the U. S. Environmental Protection Agency (U.S. EPA) and the National Highway Traffic Safety Administration (NHTSA) to review the standards since the California program closely mirrors the national program for these model years.

ZEV Regulations

In 2012, the Board approved substantial increases in California's ZEV regulation requirements. In its MTR, staff agreed to evaluate the growing ZEV market and consumer acceptance of those vehicles. Additionally, staff analyzed consumer survey data of plug-in electric vehicles, infrastructure development, and a review of the technological advancements in ZEVs since the 2012 rulemaking. Accordingly, CARB has initiated a number of outside studies to evaluate consumer vehicle purchase decisions and how different types of ZEVs and plug-in hybrids are being used within a household. Results of this analysis are presented in the staff's MTR report.



PM Standard

The Board adopted a 1 mg/mi PM standard as part of the LEV criteria pollutant fleet standard. At the time the standard was adopted, the Board directed staff to verify the current gravimetric measurement method's ability to accurately measure PM emissions at likely compliance levels and re-examine the timing and stringency of the standard. The measurement method's ability was verified in October 2015 when the results of the multi-year evaluation were presented to the Board. Subsequently, a technical feasibility study of PM emissions control from projected low-greenhouse gas vehicle technology was conducted. The results from this, and other studies, are reflected in staff's MTR report. The Board approved staff's assessment of the feasibility of the 1 mg/mi standard and maintained a 2025 implementation date.

Greenhouse Gas Regulations

The Board directed staff to collaborate with U.S. EPA and NHTSA to review the federal light-duty greenhouse gas standards for 2022 through 2025 model years. This review included collaborating on a second joint Technical Assessment Report (TAR) to re-assess the technical assumptions and analysis used to develop the greenhouse gas standards. The draft (Joint) TAR was published for public comment in July 2016. After reviewing public comments, U.S. EPA updated their analysis and published for public comment in November 2016 a proposed determination that the 2022 through 2025 federal standards remain as adopted. Subsequent to a review of public comment, U.S. EPA concluded their midterm evaluation and published a final determination in January 2017 that affirmed the existing federal greenhouse gas standards would remain as adopted.

CARB's technical assessment was performed in parallel and was reflected in staff's MTR report. The Board agreed with staff's assessment, noting the standards should remain as adopted in 2012. Additionally, the Board directed staff to begin work on its next phase of standards for new vehicles.

Midterm Review

- 2017 Midterm Review Report
- ZEV Regulatory Calculator
- 2016 CARB Advanced Clean Cars Symposium



Information Updates to the Board

In March 2017 CARB staff presented the Board with the results of CARB's MTR. In addition, staff has already provided yearly status updates to the Board since the ACC regulations were first adopted in January 2012. Links to these status updates are provided below.

March 23 and 24, 2017 board hearing

- Hearing notice (available by request)
- Resolution 17-3
- Staff Presentation

July 21, 2016 board hearing

- Staff presentation
Focus: Update on the Joint Draft Technical Assessment Report for the Midterm Evaluation of the 2022-2025 model year Greenhouse Gas Standards and Corporate Average Fuel Economy Standards for Light-Duty Vehicles

October 22, 2015 board hearing

- Staff presentation 1
Focus: Updates on greenhouse gas technology technical assessment work with federal agencies, current ZEV sales, and ZEV-related research contracts related to consumers.
- Staff presentation 2
Focus: PM measurement feasibility
- Technical Support Document

October 23, 2014 board hearing

- Staff presentation
Focus: Updates on greenhouse gas technology technical assessment work with federal agencies, ZEV-related research contracts related to consumers, and the feasibility of particulate matter measurement



October 24, 2013 board hearing

- Staff presentation
Focus: ZEV implementation and infrastructure

Resources

- U.S. EPA Midterm Evaluation of Light-duty Vehicle Standards for Model Years 2022-2025
- NHTSA CAFE Fuel Economy Standards and Midterm Evaluation for Light-Duty Vehicles, MYs 2022-2025
- Advanced Strong Hybrid and Plug-In Hybrid Engineering Evaluation and Cost Analysis
- Technical Analysis of Vehicle Load-Reduction Potential for Advanced Clean Cars

Research

- Advanced plug-in electric vehicle usage and charging behavior
- New car buyers' valuation of zero-emission vehicles
- Examining factors that influence ZEV sales in California
- The dynamics of plug-in electric vehicles in the secondary market and their implications for vehicle demand, durability, and emissions

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