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Integrated Resource Planning	
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Update on Carbs Policies for Electrification of Light-duty Sector	
4.18.17 Presentation by Dr Alberto Ayala of California Air Resources Board	
Raquel Kravitz	
California Energy Commission	
Commission Staff	
4/18/2017 8:23:17 AM	
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California Energy Commission IEPR Workshop on Integrated Resource Plans – Light-duty Sector April 18, 2017

Update on CARB's Policies for Electrification of the Light duty Sector

Dr. Alberto Ayala Deputy Executive Officer CALIFORNIA AIR RESOURCES BOARD



Guiding priorities for CARB's LDV policies

- Emission reductions from transportation sector are needed to reach California's clean air and climate targets
- #I priority is zero emissions and the trifecta environmental benefit from wide use of sustainable transportation energy
- Leverage CARB regulatory requirements with other actions to remove barriers to ZEV adoption
- Infrastructure (charging and H₂ fueling) is a key remaining barrier
 - Utility and load-serving entity participation is essential to close infrastructure gap

CARB's Midterm Review and the Board's Final Determination

The Midterm Review

- Technical and cost evaluation of light-duty vehicle LEVIII GHG and PM standards and the ZEV Mandate
- Requirements adopted in 2012 (waiver in place for years)
- Same standards in CA as rest of US (ONP)
- Key question: do standards remain technically and economically feasible for the latter years (2022-2025)?

The 2025vstandards under review

- LEVIII GHG emission limit ~166 gCO2e/mile or ~54.5mpg (~34% reduction)
- LEVIII PM limit 1 mg/mi
- ZEV requirement ~15% of all new car sales (adding to ~1.5M ZEVs in CA)
- The three standards are integrated into a single, coordinate policy – The Advanced Clean Cars (ACC) Program

Multi-year, 3-agency collaborative process yielded robust, fact-based, most extensive technical record to date

Draft Technical Assessment Report:

Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for Model Years 2022-2025

@ Air Resources Board

Final Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation



California's Advanced Clean Cars Midterm Review

> Summary Report for the Technical Analysis of the Light Duty Vehicle Standards

SEPA United States Environmental Protection

Callerds Industrial Protocols Aprece Concess Board

January 18, 2017

Board Approved MTR and Reached Final Determination

- Board reaches same conclusion as previous EPA
- GHG, PM, and ZEV Standards are appropriate and more cost-effective than 2012 estimates
- Fuel savings and better TCO for consumers offset tech costs
- Accelerate and expand non-regulatory complementary policies on infrastructure, consumer education and awareness, and incentives
- Action officially closes California's MTR
- Directs staff to begin work on 2026+ regulations
- U.S. EPA re-opened national Midterm Evaluation
 - No formal process yet, or discussions with California



Traffic in Los Angeles in December. California is authorized to enact its own stricter emissions rules under a Clean Air Act waiver. Andrew Cullen for The New York Times

California's 2030 Target

THE 2017 CLIMATE CHANGE SCOPING PLAN UPDATE

THE PROPOSED STRATEGY FOR ACHIEVING CALIFORNIA'S 2030 GREENHOUSE GAS TARGET



LD EV programs – A building block of California's Scoping Plan

Scoping Plan Re-affirms Need for ZEVs & Clean Cars





Looking forward – Development of the new California LEV IV 2026+ standards