

VOLKSWAGEN

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Comments on the California Air Resources Board Proposed Advanced Clean Cars II Amendments from Public Workshop June 26, 2024

To the Clean Cars Staff at the California Air Resources Board,

Volkswagen Group of America, Inc. (Volkswagen), on behalf of itself and its parent company, Volkswagen AG, submits these comments regarding California Air Resources Board's (CARB) proposed Advanced Clean Cars II (ACC II) amendments discussed during the June 26th, 2024, public workshop. To achieve a successful and economical program which benefits California citizens, coordination between California regulations and the U.S. Environmental Protection Agency's (EPA) Multi-Pollutant Rule¹ is necessary. Cohesive programs enable consumer adoption of electric vehicles (EVs).

Volkswagen participated in the development of the comments submitted by the Alliance for Automotive Innovation (AAI) and supports those comments and positions. It is important for Volkswagen to reiterate AAI's concerns regarding misalignment between the regulations and the additional burden this will cause for industry. Harmonization is critical and Volkswagen will continue support of AAI in its efforts with CARB staff.

Proposed Amendments

A smooth transition to an electrified market requires a coordinated regulatory structure. Volkswagen supports CARB's commitment to reducing Light-Duty criteria and CO₂ emissions. Volkswagen Group of America, Inc. CEO, Pablo Di Si, stated that "the long-term vision for Volkswagen Group is still electric," but various factors (such as consumer adoption and charging infrastructure) affect the amount of time it takes to achieve this goal.² CARB's amendments align in stringency with the EPA Multi-Pollutant Rule, however, as pointed out by AAI, differences in the programs create significant burden on industry without delivering significant marginal environmental benefits. Also, CARB has identified additional areas which

¹ U.S. Environmental Protection Agency, Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles, 89 Fed. Reg. 27842 (April 18, 2024) (Final Rule), [Federal Register :: Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles](#)

² Pablo Di Si on CNBC's Power Lunch (May 2024), https://www.linkedin.com/posts/activity-7193999542428590081-ywwb/?utm_source=share&utm_medium=member_desktop

would expand the scope of the existing ACC II regulations. Volkswagen's comments are based on the previous amendment responses along with CARB's current request for feedback.

CA Greenhouse Gas (GHG) Regulations

Volkswagen agrees with AFAl that additional CARB-specific GHG regulations as a backstop are unnecessary and agrees that related program complexities (additional certification, test procedures, data reporting, etc.) will increase costs for both manufacturers and consumers while diverting resources away from electrification transition. Volkswagen echoes industry's sentiments that a California GHG program should not be included in an ACC II Amendment package. Including a new (GHG) program with a differing timeline from the rest of the ACC II regulatory package will confuse manufacturers' and 177 states' implementation of the discrete parts of CARB's regulatory program. Volkswagen requests CARB adhere to EPA's GHG standards and move forward without adding a new CA GHG program through its current efforts to amend the ACC II regulation.

In the event that CARB chooses to proceed with GHG rulemaking efforts outside of these ACC II amendments Volkswagen offers the following in response to CARB's intentions.

GHG Backsliding

Volkswagen agrees with AFAl's comments that fleet averaging combined with increasing zero-emission vehicle (ZEV) sales will not create an "ICE Backsliding Risk."

Internal Combustion Engine (ICE)-only Fleet Average

CARB has proposed adoption of GHG emission standards for combustion engine operation – ICE vehicles and non-electric operation of plug-in hybrid electric vehicles (PHEVs). Volkswagen requests CARB retain both ZEVs and PHEVs' electrical operation in the fleet average. The ZEV Mandate acts as a de facto GHG regulation; the reduction of ICEs year-over-year and consistent ZEV increases will automatically result in GHG reductions.

PHEV Fleet Utility Factor (FUF)

Argonne National Lab (ANL), in conjunction with Society of Automotive Engineers (SAE), AFAl, and other industry stakeholders has formed a task force whose focus is to better understand PHEV electric utilization to determine an updated FUF. The methodology and the factor defined in the legislation should be dependent upon data collected over the next several years. Volkswagen recommends that the current FUF remain in place until this new data is available.

Credit Flexibilities

Volkswagen recommends CARB fully align with EPA's Multi-Pollutant Rule regarding credit flexibilities (off-cycle, A/C leakage, A/C efficiency). Lack of coordination only creates additional reporting burden for manufacturers.

Excess Credits / Averaging, Banking, and Trading Provisions Across Programs

Due to the lack of charging infrastructure and slowing consumer adoption in various individual state markets and regions, Volkswagen does not forecast excess ZEV vehicle values. Even with an increase in e-mobility, Volkswagen does not see this as a viable pathway to add additional credits within a GHG program.

While Volkswagen does not agree with CARB's intention of GHG rulemaking within the ACC II amendments, Volkswagen looks forward to having further discussion and providing input for a model year (MY) 2030 and beyond GHG rulemaking.

LEV IV

Particulate Matter (PM)

CARB finalized a 1 mg/mile standard in its LEV IV regulation. EPA's Multi-Pollutant Rule finalized a 0.5 mg/mile standard. CARB now plans on harmonizing with EPA's PM standards for 25°C FTP and the US06 drive cycles for 2030 and subsequent model years. Volkswagen recognizes CARB's interest in harmonization, however, lowering the standard for the US06 from 3 mg/mi to 0.5 mg/mi is an extremely significant reduction.

Harmonization of Bin Structure

Despite a lack of alignment with EPA's Multi-Pollutant Rule's Tier 4 Bin structure, CARB does not propose any changes to their light-duty vehicle Bin structure. If the Bin structures are misaligned, the fleet average cannot be aligned. Program misalignment creates unwarranted additional significant reporting burden and opportunities for inaccuracies. Volkswagen requests that CARB aligns to EPA's Multi-Pollutant Rule Tier 4 Bin structure.

High-Altitude Testing

EPA's final Tier 4 regulations do not include US06 and SC03 standards in its high-altitude requirements. EPA has never set 50°F standards. Volkswagen agrees with AFAC's comments regarding high-altitude standards for US06, SC03, and 50°F. CARB's proposed, federally misaligned, high-altitude testing requirements only create burden on manufacturers. Additional testing is not feasible given the lack of capable facilities, further resulting in manufacturer investment in technology that will be obsolete in California in MY2035 (and later). Volkswagen recommends that CARB harmonize its ACC II LEV IV regulations with the EPA Tier 4 regulations and eliminate high-altitude standards for US06, SC03, and 50°F.

ZEV Assurance Measures & ZEV III

Environmental Performance Label

Volkswagen agrees that the existing Federal Fuel Economy and Environmental label provides limited value for battery electric vehicles (BEVs). However, a separate Environmental Performance Label (EPL) specific for California and Section 177 states is not feasible. Volkswagen requests that CARB and EPA work together to implement an improved Monroney label that would include BEV-specific information yet would be applicable in all 50 states. Volkswagen will continue to support AFAI and the Mobile Source Technical Review Subcommittee's (MSTRS) "EV Testing/Labeling" workgroup in the development of an updated Monroney label.

Charging Requirements & Interoperability

Beginning in MY2026, CARB requires charging cords to be provided in all BEVs and PHEVs³, and if the charger does not meet SAE J1772⁴ standards, an adaptor must also be provided. Volkswagen agrees with AFAI's assessment that adapters add little to no value to the customer and may impede the transition of SAE J3400⁵ (NACS) vehicle ports. Volkswagen requests CARB eliminate the requirement to supply an adapter.

CARB has now proposed the incorporation of both DIN Spec 70121⁶ and ISO 15118-2⁷ to test conformance for MY2028 and later charging. Volkswagen requests that no additional testing burden be required for manufacturers, given charging inconsistencies can be caused by various factors (e.g., charging station issues, charging cord issues, etc.), but recommends an attestation statement for conformance.

Battery Labeling

CARB has proposed potential updates and clarifications to their finalized battery labeling requirements (1962.6)⁸ for BEVs and PHEVs. These battery labels must be implemented starting with MY2026 EVs. Volkswagen requests that if CARB is intending to provide updates to the current battery labeling requirements, that they afford manufacturers sufficient lead-time to implement any new battery labeling requirements. Further, battery technology is evolving rapidly. Volkswagen Group's PowerCo⁹ and QuantumScape have entered an agreement to industrialize solid-state batteries,¹⁰ which may change the current process and characteristics of battery packs.

³ 13 CCR §1962.3

⁴ SAE J1772 – SAE Electric Vehicle and Plug in Hybrid Electric Vehicle Conductive Charge Coupler. (October 2017).

⁵ SAE J3400 – NACS Electric Vehicle Coupler. (December 2023).

⁶ DIN SPEC 70121 - Electromobility - Digital communication between a d.c. EV charging station and an electric vehicle for control of d.c. charging in the Combined Charging System

⁷ ISO 15118-20:2022 – Road Vehicles – Vehicle to Grid Communication Interface

⁸ 13 CCR §1962.6

⁹ Volkswagen Group's Battery Company <https://www.powerco.de/en.html>

¹⁰ QuantumScape. "PowerCo and QuantumScape Announce Landmark Agreement to Industrialize Solid-State Batteries." *QuantumScape*, 11 July 2024, www.quantumscape.com/powerco-and-quantumscape-announce-landmark-agreement-to-industrialize-solid-state-batteries/

Volkswagen emphasizes the importance of clear and immediate guidance from CARB. Currently, MY2024 and MY2025 are in the market, and MY2026 could start as soon as January 2, 2025. Production plans are close to being finalized, and lead-time is crucial. Given the extensive amount of information CARB requires on the physical label and in the customer-accessible data repository, ample time is required to ensure compliance is met should updates be made. If further updates to or clarification of battery labeling requirements that were finalized in 2022 will be needed, Volkswagen requests a delay or phase-in of battery labeling requirements.

The EU Battery Passport (EU 2023/1542)¹¹, involves more data and various steps, starting after February 18, 2027. The Section 1962.6 requirements will cause duplicative work streams, without producing any additional benefit to consumers. Volkswagen requests that CARB allow for a deemed to comply mechanism if precursory steps to EU Battery Passport are met.

Data Standardization

Volkswagen strongly requests CARB adopt an extended phase-in for the Data Standardization requirements (Section 1962.5).¹² The originally proposed phase-in from CARB will deter new models from being introduced into the market and may require cancelling some carryover models, due to this requirement. In previous amendments comments Volkswagen suggested a four-year extended phase-in starting in MY2026 with a 40/60/80/100 percent requirement, and a fully phased-in requirement in MY2029; carryover and newly introduced MY2027 vehicles would require infeasible cycle-plan software updates. Volkswagen continues to emphasize the necessity of this recommendation.

This proposed four-year phase-in would allow for new model introductions and continuation of end-of-production of current models while still retaining environmental benefits of these carryover EVs. It also provides CARB more time to analyze and review the data and implementation as best fits for all key players. The focus on new vehicle projects will allow Volkswagen to maintain current offerings while allowing rapid deployment of new ZEV offerings. Volkswagen requests that CARB's ACC II regulation incorporate by reference both SAE J1979-2¹³ (ICE and PHEVs) and SAE-1979-3¹⁴ (BEVs) regarding Over-the-Air (OTA) updates.

¹¹ Regulation (EU) 2023/1542 of the European Parliament and of the Council of 12 July 2023 concerning batteries and waste batteries, amending Directive 2008/98/EC and Regulation (EU) 2019/1020 and repealing Directive 2006/66/EC (Text with EEA relevance). (2023). Official Journal, L 191, 1-117. ELI: <http://data.europa.eu/eli/reg/2023/1542/oj/legislation>

¹²13 CCR §1962.5

¹³ SAE J1979-2 – SAE E/E Diagnostic Test Modes: OBDOnUDS. (April 2021).

¹⁴ SAE J1979-3 – SAE E/E Diagnostic Test Modes: Zero Emission Vehicle Propulsion Systems on UDS (ZEVonUDS). (October 2023).

Conclusion

Volkswagen appreciates the opportunity to provide comments and feedback to CARB on the ACC II regulatory package amendments. Thank you for your consideration of these comments. Should you have any questions, please contact Terri Teller (Terri.Teller@vw.com) or me directly.

Sincerely,

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