



Comments of Kia Corporation
to the
California Air Resources Board
RE: Advanced Clean Cars II Amendments

January 12, 2024

The Kia Corporation (Kia) submits these comments to the California Air Resources Board (CARB) on the Advanced Clean Cars II (ACC II) Amendments November 2023 workshop. Kia appreciates CARB providing the opportunity for automaker stakeholders to provide high-level preliminary feedback on the potential ACC II amendments. Kia looks forward to constructive engagement with the CARB on this rulemaking through our written comments and continued dialogue.

Kia supports comments submitted by the Alliance for Automotive Innovation (AFAI) on CARB's ACC II amendments November 2023 workshop. Kia incorporates AFAI comments here by reference. Kia also endorses comments made by the Hyundai-Kia America Technical Center, Inc. (HATCI) and incorporate them here by reference and attach them as Appendix A.

Kia, part of the Hyundai Motor Group (HMG), is a dynamic part of the world's third largest automaker. With a new brand purpose, "Movement That Inspires," Kia is a symbol of innovation and a rising champion of electric vehicles (EVs) and sustainable mobility solutions. Kia is in the midst of investing \$28.5 billion by 2028 in EVs and other advanced vehicle technologies.

Kia appreciates CARB waiting to see the final multipollutant rule issued by U.S. Environmental Protection Agency (EPA). Industry stakeholders have engaged extensively in dialogue with EPA regarding its multipollutant proposal and know EPA is deliberating some of the elements in the proposal. It is likely that there will be adjustments and revisions from the original EPA proposal. Thank you for providing industry and EPA time to finalize these important issues before proposing amendments to the ACC II.

Greenhouse Gases (GHG)

In CARB's November 2023 workshop, CARB generally outlined its intention to develop new standards beyond 2025 model year to support California's climate goals and consider alignment with EPA where appropriate. CARB stresses the need to maintain a California GHG program to protect against federal volatility.

CARB outlines its concern that EPA's fleet average standard may lead to fleet backsliding as the zero emission vehicles (ZEV) portion of the fleet increases. CARB is looking for input on potential mechanism to prevent backsliding.

As the industry transitions to increasing levels of electrification in the fleet, the remaining ICE fleet, including larger vehicles and lower price vehicles that are more difficult to electrify and will take longer to electrify, will continue serving as an important function in the fleet. Any emissions from the increasingly smaller portion of the ICE fleet are not a result of fuel efficiency technologies being taken off the vehicles as these technologies will remain on these ICEs. Consequently, Kia disagrees that there is a need to develop a mechanism to prevent backsliding.

CARB expresses concern regarding the current Fleet Utility Factor (FUF) overstating emissions benefits from plug-in electric vehicles (PHEVs). Kia appreciates CARB waiting to see what EPA finalizes on PHEV (FUF).

Kia does not support EPA's assumptions on PHEV FUF outlined in their proposal. EPA's analysis is limited to multiple publications from the International Council on Clean Transportation (ICCT). The EPA's use of the ICCT-BAR curve is inappropriate given the expansion of Level 2 charging occurring as electric vehicles (EVs) increase across the country. The ICCT publications focus on the limited electric driving share of PHEVs in Europe. ICCT's assumptions are skewed as they assume the same situation in Europe where there were unique PHEV tax incentives, coupled with limited charging infrastructure available in multifamily dwellings. All of which are not good comparisons to the state of California - California's consumers, vehicles, or the charging infrastructure.

Further, California already has mechanisms in place for ensuring PHEVs on California roads will have a minimum electric range which will increase electric driving in California. If CARB feels strongly that the real-world FUF is too low, Kia recommends that CARB work with industry to help incentivize reminders for consumers to plug in more often.

Refrigerant Leakage Credit

CARB outlines possible changes to its credit programs including eliminating their A/C refrigerant leakage credit and eliminating air conditioning (A/C) efficiency credits for battery electric vehicles (BEVs). Kia supports the continuation of A/C refrigerant leakage credit and agrees that A/C refrigerant leakage credits should continue to be included in the ACC II regulations. Kia encourages CARB to wait to see the final multipollutant rule issued by EPA. Kia recommended to EPA, instead of immediate elimination, at least a phase-down of the leakage credits before eventually discontinuing the A/C leakage credit. Kia also supports the continuation of A/C efficiency credits for battery electric vehicles (BEVs).

Low-Emission Vehicles (LEV)

In CARB's November 2023 workshop, CARB points out differences between what CARB adopted as part of ACC II including particulate matter (PM) standards including PM standards on the US06. Again, Kia greatly appreciates CARB waiting to see the final multipollutant rule issued by EPA, particularly in regard to the PM standards and other criteria pollutant proposed requirements.

It will be incredibly challenging to meet EPA's proposed standard of 0.5 milligram per mile (mg/mi) that must be met across three test cycles (25 °C Federal Test Procedure (FTP), US06, -7 °C FTP) and to be met as a per-vehicle cap, not a fleet average.¹ The investments needed to meet a 0.5 mg/mi standard including but not limited to the capital resources needed for installing gasoline particulate filters (GPFs) on all vehicles will divert the much-needed capital away from vehicle electrification and back to ICEs. This would push costs up to produce ICE vehicles and increase ICE vehicle price for consumers. This is significant for Kia as our vehicle lineup includes many vehicles whose target buyers are very price sensitive.

Kia also has concerns about the feasibility and repeatability of the measurement accuracy of the proposed 0.5 mg/mi standard. The emissions labs across the industry are still learning how to accurately measure PM at the 3 mg/mile standard due to the uncertainty involved in all the processes leading to final PM results in mg/mile.

Consequently, Kia does not support a more stringent PM standard of 0.5 mg/mi and recommended EPA alignment with CARB's PM standards adopted under the ACC II (i.e., LEV IV) program.

ZEV Assurances

In CARB's November 2023 workshop, CARB outlined its intention to develop new ZEV assurance measures including interoperability standards and consumer-facing vehicle labels.

Kia supports efforts to ensure consumers have a positive experience charging their EVs. Kia welcomes the opportunity to develop robust interoperability standards and regulations and setting a reasonable but aggressive timeline for meeting them. Interoperability is lacking in the market and needs to come together with a comprehensive execution plan if we are to realize our goal of widespread consumer adoption of EVs.

There are federal efforts underway through the National Charging Experience Consortium (ChargeX), a collaboration among Department of Energy (DOE) national labs, EV charging equipment manufacturers, automakers, and consumer advocates. ChargeX is funded federally and aims to gauge and improve the customer experience with public EV charging infrastructure in the US. Given the federal agency leadership and the well-rounded stakeholder participation in ChargeX, CARB should consider participating in this consortium and be mindful not to duplicate efforts.

In CARB's November 2023 workshop, CARB outlined its interest in introducing a new ZEV label that could provide improved information to consumers on an electric vehicles' electric range, charge time, and efficiency metric (e.g. miles/kWh). Kia welcomes the opportunity to provide a ZEV label that increases the consumer knowledge of how EVs charge, drive, and the consumer cost of both of these. However, Kia encourages CARB to evaluate which information consumers will actually find valuable. Kia will prioritize providing metrics for the ZEV label as something automakers already have on hand and that would not require the automaker to conduct any further testing or any other additional burden.

¹ 88 Fed. Reg. 29,264.

ZEV Charging

While CARB is not taking specific comment on charging standards, in CARB's November 2023 workshop, there was stakeholder discussion on CARB's requirement for all EVs to have Combined Charging System (CCS) (SAE J1772) compatible chargers (requiring an adapter for EVs that have the North American Charging Standard (NACS) (SAE J3400)).

Kia, like many other automakers, have moved towards SAE J3400 (NACS) and by the end of 2024 all of Kia's U.S. assembled EVs will be SAE J3400 (NACS) compatible. Industry making a transition to NACS will be helpful for EV consumers making the charging more convenient and less confusing. Kia urges CARB to eliminate the requirements for EVs to have CCS charging (SAE J1772) and allow both SAE J3400 (NACS) and SAE J1772 (CCS) charging on EVs. Further, CARB should only require the vehicle to have an adapter (for SAE J3400) only if the EV has a CCS charging system, understanding the U.S. market charging fleets will be principally NACS (SAE J3400) compatible.

Conclusion

Kia looks forward to constructive engagement with the CARB on this rulemaking on the proposed amendments to the ACC II regulation through our written comments and continued dialogue. Kia appreciates the opportunity to provide preliminary comments. For more information, please contact Christopher Wenk, Vice President of Government Affairs at cwenk@kia-dc.com.

Appendix A

January 11, 2024

Via Email: cleancars@arb.ca.gov

Via docket: <https://ww2.arb.ca.gov/public-comments/comment-log-advanced-clean-cars-ii-amendments-november-workshop>

Ms. Liane Randolph, Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Dear Chair Randolph,

Hyundai America Technical Center, Inc. (HATCI) appreciates the opportunity to provide comments on the proposed amendments to the Advanced Clean Cars II (ACC II) regulations discussed during the California Air Resources Board's (CARB) November 15, 2023 workshop (Workshop). HATCI is the U.S.-based research and development (R&D) branch for both Hyundai Motor Company (HMC) and KIA Corporation (Kia), and together with HATCI, are collectively referred to as Hyundai Motor Group (HMG). HATCI is commenting on behalf of both HMC and Kia. Additionally, HATCI supports the comments submitted by the Alliance for Automotive Innovation (AFAI) regarding the ACC II amendments.

As described during the Workshop, HMG agrees with CARB's decision to wait until the U.S. Environmental Protection Agency (EPA) Multi-Pollutant Emission Standards for Model Years 2027 and Later for Light-Duty and Medium-Duty Vehicles final rule (Multi-Pollutant Rule) is issued before deciding on proposed amendments to ACC II's Green House Gas (GHG) and Low-Emission Vehicle IV (LEV IV) criteria standards.

I. GHG standards

HMG continues to make strong investments in our electrified vehicle fleet and is committed to working toward California's climate target for carbon neutrality by 2045. HMG understands CARB's desire to establish a California GHG program and ensure continued movement towards California's climate goals.

CARB noted its concern in the Workshop that the federal GHG standards alone do not prevent backsliding and requested input on anti-backsliding mechanisms. HMG is committed to moving forward with zero emission vehicles which will soon remove all risk of GHG backsliding. HMG does not believe potential backsliding mechanisms are necessary in the ACC II regulations given HMG's strong commitments to electrification, including its goal for every HMG vehicle to be fully electrified by 2040 and some brands being fully electric by 2030.

Additionally, HMG does not support the direct adoption of EPA's GHG standards for the ACC II regulations. The stringency of the EPA standards are based on the inclusion of ZEVs. It would be very difficult to meet the same standards with ICE only emission performance.

HMG continues to support the restoration of the deemed-to-comply option. This option would significantly reduce the reporting burden experienced by manufacturers with two separate GHG standards.

HMG agrees with CARB that leakage credits should continue to be included in the ACC II regulations. HMG believes the credits will continue to be an essential incentive for the automotive industry to ensure anti-leakage designs in vehicles. HMG is an early adopter and already fully compliant with the refrigerant rule in the American Innovation and Manufacturing Act. HMG appreciates the direct leakage credits to reward early compliance but does not support additional regulations for low leak A/C systems. In addition to fully transitioning to HFO-1234yf in model year 2021, HMG also applied a seal washer to our system to further prevent leakage. HMG made these large investments with the expectation that earned credits would offset some of these costs in the future. HMG recommends that CARB does not align with EPA on the immediate elimination of leakage credits, but instead proposes a gradual phase-down which will continue to encourage manufacturers to use low-leak systems.

HMG also supports the continuation of A/C efficiency credits and off-cycle credits for BEVs, as those credits encourage the development of GHG reducing technologies and provide real world benefits.

II. Criteria Standards/ LEV IV

HMG appreciates CARB waiting for the evaluation of the Multi-Pollutant Rule to consider changes to the criteria pollutant standards. HMG looks forward to further discussion on where alignment is appropriate after reviewing the final Multi-Pollutant Rule once issued.

For consistency and reducing test burden, HMG believes it is appropriate for CARB to align certification bins with the EPA.

HMG is opposed to aligning with EPA's proposed particulate matter (PM) standard of 0.5 mg/mi in the Multi-Pollutant Rule. HMG has expressed concern with the EPA related to measurement inaccuracy in testing at this extremely low level of PM. HMG's R&D is preparing for CARB's current PM target of 1.0 mg/mi and urges CARB to maintain the current PM standard in the ACC II regulation. CARB's current target of 1.0 mg/mi is already difficult and will require significant design changes, which include adding a gasoline particulate filter (GPF) for several models. At this time, HMG does not believe a 0.5 mg/ mi standard to be reasonable or technically feasible.

III. North American Charging Standard (NACS)

HMG, with many other automakers, are quickly moving towards the North American Charging Standard (NACS) (SAE J3400, expected to be finalized around the middle of 2024). HMG strongly urges CARB to include NACS as an option to meet compliance with ACC II's charging requirements. HMG also requests that CARB eliminate the requirement for the Combined Charging System (CCS) adapter from the ACC II regulations for model year 2026. This is a time sensitive issue, as product planning is already underway for how to source and package these adapters. A final decision in summer 2025 based on CARB's current timeline for the ACCII amendments would be too late for vehicles already certified for model year 2026.

IV. ZEV Assurance Measures - Environmental Performance (EP) Label

HMG recognizes CARB's desire to include more detailed and valuable information for potential EV consumers on the EP label. HMG strives for consumers to have clear information when making a decision to purchase an electric vehicle but urges CARB to consider the excessive burden to the manufacturer compared to the value the information brings to the consumer. HMG urges CARB to coordinate with federal agencies and align with the EPA/DOT fuel economy label. This would avoid duplicative, conflicting, and confusing labels for consumers.

If alignment is not possible, HMG suggests that CARB create metrics that can be derived from an equation for the new label rather than submitting the data from actual testing. Another option for consideration is to modify current test procedures to generate additional data rather than adding new tests. Both options could support additional label information while avoiding increased test burden.

V. Conclusion

HMG thanks CARB for the opportunity to comment and looks forward to engagement with CARB on the proposed amendments to the ACC II regulation.

Sincerely,



Richard Willard

Director, Certification and Regulation

Hyundai America Technical Center, Inc.