



Comments from Kia Corporation
to the
California Air Resources Board

RE: Advanced Clean Cars II Amendments

July 26, 2024

The Kia Corporation (Kia) submits these comments to the California Air Resources Board (CARB) on the Advanced Clean Cars II (ACC II) Amendments June 2024 workshop. Kia appreciates CARB providing the opportunity for automakers to provide high-level preliminary feedback on the potential ACC II amendments. These comments provide Kia's preliminary feedback. 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 proposed ACC II amendments June 2024 workshop. Kia incorporates AFAI comments here by reference. Kia also endorses comments made by the Hyundai-Kia America Technical Center, Inc. (HATCI) and incorporates them here by reference and attaches them as Appendix A.

Kia, part of the Hyundai Motor Group (HMG), is a dynamic part of the world's third largest automaker. Kia is committed to electric vehicles (EVs) and is investing \$28 billion by 2027 into EVs and other advanced technologies. Kia is focused on popularizing EVs at all levels of the market and becoming a global leader in EVs and electrification.

Kia appreciates the opportunity to collaborate with CARB in the development of amendments to the ACC II regulations. It is important for industry that CARB's regulations are harmonized as closely as possible with U.S. Environmental Protection Agency's (EPA's) Multi-pollutant Emissions standards (also Tier 4). Closely harmonized programs are central to stable, cost-effective regulatory standards. The reported goals and stringencies for EPA and CARB are essentially the same, therefore there is potential to align the standards more closely, particularly requirements around zero emissions vehicles (ZEVs). Kia has invested billions of dollars and will continue to invest billions to strive to meet the 100 percent ZEV goal by 2035. We need to keep our investments focused on ZEV requirements, and less so on internal combustion engines (ICE). Our comments reflect this goal of close harmonization between CARB and EPA.

Criteria Emissions (LEV 4)

NMOG+NO_x

CARB is proposing to maintain the Low-Emission Vehicle IV (LEV 4) non-methane organic gases and nitrogen oxide (NMOG+NO_x) fleet average standard of 30 milligrams per mile

(mg/mi) for MY2026 and later years while starting a ZEV and non-ZEV fleet average standard phase-in in MY2029. While this approach is not aligned with EPA, Kia supports the separation of the fleet averages and the NMOG+NOx standard for the non-ZEV fleet average as it requires the same level of emissions control as the EPA's NMOG+NOx standard.

Bins and Cleaner Federal Car Provision

Kia supports the industry's general request that CARB and EPA align the bins for the NMOG+NOx standards. More importantly for Kia, we support eliminating the Cleaner Federal Car Provision.¹ Kia agrees that the Cleaner Federal Vehicle provision has no impact on vehicle emissions and is no longer needed. Eliminating the Cleaner Federal Car Provision allows automakers more compliance flexibilities.

Greenhouse Gas Standards (GHG)

ICE GHG Standards and Backsliding Provisions

In CARB's November 2023 workshop, CARB expressed concern that, as the ZEV portion of the fleet increases faster than the ZEV portion of the federal fleet, ICE vehicles could backslide on GHG emissions progress. Kia disagrees that there is a need to develop a mechanism to prevent backsliding for reasons outlined below.

There is no evidence of GHG emissions backsliding at the national level as ZEV sales increase. There is no de-contenting of emissions technology on ICE models, and any emissions from the increasingly smaller portion of the ICE fleet are not a result of fuel efficiency technologies being taken off of the vehicles. These fuel efficiency technologies will remain on Kia's ICEs going forward. As the industry transitions to ZEVs, the remaining ICE fleet is expected to mainly be larger vehicles and price-sensitive segment vehicles that are more difficult to electrify but serve important functions in the transition.

In the June 2024 workshop, CARB lists technologies available to further reduce ICE GHG emissions including hybridization, lightweighting, and advanced engine technologies. Kia is already using these technologies to lower GHG emissions, and it is understood that there is not much more to be gained by these technologies.

Implementing GHG backsliding provisions will essentially require automakers to simultaneously make investments in ICEs and EVs at once, diverting much needed capital and resources away from our focus of full vehicle electrification. Kia would have to re-shuffle research and development and personnel since we have transitioned our workforce to EVs. We already need to divert resources back to ICE vehicles to comply with the upcoming more stringent criteria pollutant standards. Requiring further fuel efficiency technologies in higher amounts on ICE vehicles could slow down the transition of electrification at the national level. Further, automakers would have to invest in technologies that will not be allowed in California and 40 percent of the U.S. market after 2034. These investments would push costs up to produce ICE vehicles and increase prices for ICE vehicles.

Kia urges CARB to harmonize with EPA GHG regulations and not require additional technologies beyond that driven by the ZEV mandate and the EPA rule. While Kia is already invested in PHEVs and HEVs, requiring more in our lineup is a distraction. Kia is focused on providing great EVs as we work to improve prices down the market in the transition. Kia

¹ See Title 13, California Code of Regulations §1961.4(c)(6)

supports CARB adopting the EPA GHG regulations and including deemed to comply provision in compliance with the EPA final rule.

ICE-Only Fleet Average Standard Beginning in 2030

In the June 2024 workshop, CARB outlined its intention to develop new ICE-only (ICE and PHEV) fleet average standards beginning 2030 model year through 2034, and establishing a PHEV-only fleet average standard for beyond 2035. Again, Kia prefers that CARB harmonize with EPA regulations. Kia supports a regulation that avoids creating additional investments beyond what is required by EPA and the ZEV mandate, does not require additional testing, and does not require additional reporting.

Kia supports removing ZEVs from the fleet average starting in 2030. The stringency of this ICE-only fleet should be based on today's ICE fleet because of the reasons mentioned above regarding straining our investment resources. Removing ZEVs from the fleet average will reduce risks associated with projecting the impact of ZEVs on the GHG fleet average.

Separating the fleet averages to ICE and ZEV will also alleviate complications if the ZEV targets are adjusted in the future. There could be needed ZEV target adjustments due to challenges in the developing ZEV ecosystem.² As Kia continues to monitor the ZEV infrastructure deployment and resulting ZEV market, we remain concerned that public ZEV infrastructure, while growing, is not growing fast enough to maintain the 1.5 ports (L2 AC) and 0.6 ports (150kW+) / 100 ZEVs (67 and 133 ZEVs / port respectively) that is needed³ by 2030. California's ZEV targets and enforcement penalties should be tied to metrics that measure an adequately developed ZEV ecosystem to ensure ZEV targets stay proportional with ZEV demand and required supporting systems. Kia strongly urges California to continue to monitor the developing ZEV ecosystem.

PHEVs and the Corresponding Fleet Utility Factor

CARB expresses concern that the current Fleet Utility Factor (FUF) overstates emissions benefits from PHEVs. CARB seeks input on PHEV charge sustaining (CS) emissions rates and appropriate stringency.

Because California will require PHEVs to have a minimum 70 miles of electric range starting in MY2028, PHEVs will have a greatly increased charging capability (higher speed AC, and some with DC fast charging) and will have more electric vehicle miles traveled (eVMT) in California. Any decision to narrow the compliance benefits of PHEVs now, based on past data, is premature. CARB should decide at a later time, as we see EV charging infrastructure develop, how PHEVs should be treated in compliance. Importantly, consumer demand for PHEVs is gaining, but like BEVs, PHEVs still need incentives or flexibilities to ensure continued sales success. Kia recommends that CARB work closely with industry to help incentivize and remind PHEV owners to plug in more often and travel more miles electrically, delivering the GHG reductions that PHEVs provide.

² ZEV ecosystem refers to policies in place that encourage and support ZEV purchases and ownership. These include, without limitation, adequate public charging infrastructure, broad ZEV purchase incentives, reasonable ZEV registration fees, charging uptime enforcement, consumer education, and electric supply planning and reliability.

³ Wood, Eric, et al. "The 2030 National Charging Network: Estimating U.S. Light-Duty Demand for Electric Vehicle Charging Infrastructure," June 2023, p.35

Refrigerant Leakage Credit, AC Efficiency Credits and Off-Cycle Credits for ICEs

CARB is proposing to develop further flexibilities to accommodate a dwindling ICE fleet.

AC Refrigerant Leakage Credit: Kia supports the continuation of a nominal AC refrigerant leakage credit for ICE vehicles. Kia has fully transitioned to HFO-1234yf as of MY2021.

Off-Cycle Credits: Kia supports CARB harmonizing off-cycle credits with EPA's final rule. However, if CARB implements additional GHG anti-backsliding standards for ICEs, there should be opportunities for additional off-cycle credits for previously approved off-cycle technologies.

AC Efficiency: Kia supports CARB aligning with EPA's final rule on the AC efficiency credits for ICE and PHEVs.

ZEV Assurances and Environmental Performance Label

Kia supports the idea of an Environmental Performance Label (EPL) and agrees that the current 50-state Monroney label contains limited information for a potential ZEV consumer. However, Kia urges CARB to work with EPA to update the 50-state Monroney label and create a single label for all vehicles. A single label should provide consistent and accurate information on both fuel economy and ZEV metrics.

The EPL proposed timeline suggests that there is sufficient time to coordinate with EPA on a new label. Kia supports the Mobile Source Technical Subcommittee (MSTRS) starting an "EV Testing/Labeling" workgroup to address consumer information for ZEVs. We appreciate that the MSTRS workgroup will work with SAE committees to develop the metrics and testing protocols to provide a more consistent shopping experience for ZEV customers. Kia will provide our comments and recommendations to the workgroup.

ZEV Charging and Interoperability

CARB proposes for MY2028 and thereafter that BEVs and fast charge capable PHEVs implement DIN Spec 70121 and ISO 15118-2, the latter with the Plug and Charge feature. CARB also proposes conformance test requirements for the DIN and ISO standard.

Kia looks forward to working with CARB and industry through a SAE process to identify features of the DIN and relevant sections of ISO 15118-2 that should be included, with an appropriate conformance test to verify proper implementation. If a conformance test is implemented, the conformance test should follow other conformance tests⁴ using SAE J1699-3, with software testing conformance over a standard interface.

In October 2023, Kia announced that our future BEV offerings will adopt the J3400 standard and will have access to the Tesla Supercharging network in early 2025. With the finalization of SAE J3400 standard expected soon, Kia urges CARB to swiftly amend 13 CCR §1962.3 2c (1) and (4) to allow for vehicles equipped with either J1772 or J3400, removing the requirement for adapters.

⁴ 13 CCR § 1968.2

Conclusion

Kia looks forward to constructive engagement with the CARB on the proposed amendments to the ACC II rulemaking 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



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July 26, 2024

Via Email: cleancars@arb.ca.gov

Via docket: <https://ww2.arb.ca.gov/public-comments/comment-log-advanced-clean-cars-ii-amendments-june-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) June 26, 2024 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.

HMG agrees with CARB's decision to review 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 before proceeding on proposed amendments to ACC II's Greenhouse Gas (GHG) and Low-Emission Vehicle IV (LEV IV) criteria standards. HMG appreciates where alignment with the EPA final rule is being proposed and looks forward to more engagement in the amendment process.

Light-Duty GHG standards

As presented in the June 26 workshop, CARB is proposing an Internal Combustion Engine (ICE)-only GHG fleet average standard beginning in model year (MY) 2030. HMG understands CARB's desire to update the GHG standard and requests CARB to create consistency and align with the EPA GHG standards in the forthcoming MY 2027 multipollutant rule, including electric vehicles (EV)s. Harmonizing CARB's GHG standards with those set by the EPA is critical to streamlining regulatory compliance.

CARB presented a slide during the workshop titled "Technologies available today can further reduce emissions from Light-Duty ICEVs", including lightweighting, Advanced Engine Technologies and Hybridization. HMG has incorporated all these technologies into our product plans, including expanding hybrid options in both the Hyundai and Kia vehicle line-ups, increasing the quantity of Hybrid Electric



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Vehicles (HEVs) in MY 2026 and beyond. By investing in these technologies, HMG is able to both lower the environmental impact of our vehicles and meet ongoing regulatory requirements to reduce emissions.

Off-Cycle Credits

HMG appreciates CARB's proposal to phase out Off-Cycle credits in alignment with the EPA multipollutant final rule. This is an important move towards ensuring consistent and effective emission reductions across the industry. In additional support of this alignment, we suggest CARB consider adopting a phase out schedule similar to EPA's timeline. We request that CARB eliminate the minimum sales percentage requirement associated with the off-cycle credits in 13 CCR § 1961.3 (a)(8)(A). Harmonizing the phase-out schedule and eliminating the minimum sales percentage requirement will streamline this transition, allowing HMG to allocate resources towards solutions that reduce emissions without the added complexity of managing sales targets.

Air Conditioning (AC) Refrigerant Leakage Credits

HMG is in agreement with CARB that leakage credits should continue to be included in the ACC II regulations. HMG believes this credit will continue to be an essential incentive for the automotive industry to ensure anti-leakage designs in vehicles. HMG does not support the proposal for a ZEV specific leakage standard or design requirement. HMG fully transitioned to HFO-1234yF in MY 2021, and with the finalization of the American Innovation and Manufacturing (AIM) Act, expect the rest of industry to be compliant with low-GWP refrigerants soon. While we understand the intent, we believe a specific standard poses unnecessary burden that would impact manufacturers and consumers with increased costs and product development delays, with minimal environmental benefit.

Light-Duty Criteria Standards

HMG appreciates CARB's decision to maintain the NMOG + NOX fleet average standard in the regulations. This decision supports continuity and stability needed for industry to focus resources towards advancing technologies that reduce emissions while still meeting requirements set forth by CARB.

Bins

As noted in our comments submitted for the November 2023 workshop, for consistency and to reduce test burden, HMG believes it is appropriate for CARB to align certification bins with the EPA. While we continue to advocate for full alignment of certification bins with the EPA rule, we recognize and appreciate the proposal to eliminate the Cleaner Car provision. This action will provide greater flexibility in meeting emission standards for certification.

Particulate Matter

CARB is proposing to lower the particulate matter (PM) standard to 0.5 mg/mi for the FTP and US06 test cycles, consistent with the EPA Tier 4 standards in the multipollutant rule. HMG's R&D is incorporating significant design changes, which include the addition of a gasoline particulate filter (GPF) for several models to meet this target for the ACC II regulations. While the implementation of this PM standard



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presents many challenges, HMG recognizes CARB's decision to harmonize with the EPA Tier 4 standards for consistency and supports aligning with the EPA multipollutant final rule in MY 2030.

Evaporative Emissions: Non-Integrated Refueling Canister Only System (NIRCOS)

HMG appreciates the proposal to extend preconditioning procedure to all vehicle types. HMG has advocated for this update and has plans to apply NIRCOS to all our HEVs, beginning with the MY 2026 Hyundai Palisade (LX3) HEV. The adoption of these procedures demonstrates HMG's commitment to leading in advanced emission control technologies.

High Altitude Emission Standards

HMG believes there are significant challenges associated with CARB requiring increased high altitude emission standards. There are currently a limited number of facilities capable of conducting high altitude emission testing, which are in high demand by multiple manufacturers. High altitude emission standards would also require costly vehicle system redesigns, resulting in higher vehicle costs for consumers. For all these reasons, HMG supports AFAC's position, recommending alignment with the EPA Tier 4 standards, eliminating high altitude standards for US06, SC03 and 50F. HMG is in the process of conducting high altitude testing, and welcomes discussion with CARB on this topic in the future.

ZEV Assurance Measures

Environmental Performance Label (EPL)

HMG recognizes CARB's concern that the EPA/DOT Fuel Economy label currently does not contain information that is informative for zero emission vehicles (ZEVs). HMG strongly urges CARB to coordinate with the EPA on creating a single, unified label for all vehicles. The presence of multiple labels with similar but slightly different metrics could overwhelm and cause confusion for consumers. A single label that includes consistent, accurate and credible information on both fuel economy and ZEV metrics simplifies the decision-making process to better serve consumers. HMG supports the work of the Mobile Source Technical Review Subcommittee (MSTRS) in creating a work group to gather useful and updated information on ZEVs for the Monroney label.

Charging Interoperability

Beginning in MY 2028, CARB is proposing battery electric vehicles (BEVs) and fast charge plug-in hybrid vehicles (PHEVs) require the implementation of DIN SPEC 70121 and ISO 15118-2. HMG looks forward to further detailed guidance on which specific features of DIN SPEC 70121 and ISO 15118-2 will be implemented in the timeline, and associated conformance testing.

Battery Labeling – 1962.6

HMG appreciates CARB's engagement with the automotive industry on battery labeling and certification concerns in the ACC II 1962.6 regulations and looks forward to receiving formal guidance on the topics discussed to have adequate time to implement the requirements.



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North American Charging Standard (NACS)/ SAE J3400

To reiterate our submitted comments to the November 2023 workshop, HMG urges CARB to include NACS (J3400) as an option to meet compliance with ACC II's charging requirements. With the finalization of J3400 expected soon, HMG believes it is timely and beneficial for CARB to eliminate the requirement to supply an adapter for EVs equipped with either an SAE J3400 or an SAE J1772 port.

Conclusion

HMG thanks CARB for the opportunity to comment and be involved in ongoing dialogue in this regulation process. HMG is committed to working with CARB to address the complexities and challenges in meeting the proposed standards, while also working towards our shared electrification goals.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Willard".

Richard Willard
Director, Regulation & Certification
Hyundai America Technical Center, Inc.