CALIFORNIA
AIR RESOURCES BOARD

Gavin Newsom, Governor
Yana Garcia, CalEPA Secretary
Lauren Sanchez, CARB Chair

February 16, 2026

Kelly Chappelle, Contracting Officer
Federal Aviation Administration
800 Independence Ave SW, AAQ-460,
Washington, DC 20591
9-AFN-AWA-AAQ460-Contracting-Team@faa.gov

Subject: California Air Resources Board DRAFT SIR #693KA9-26-R-00006_Response

Dear Mrs. Chappelle,

Thank you for the opportunity to comment on the draft Screening Information Request (SIR), released on January 16, 2026, for the Continuous Lower Energy, Emissions and Noise (CLEEN) Phase IV Program. The California Air Resources Board (CARB) appreciates the Federal Aviation Administration's (FAA) continued implementation of this program and recommends that the CLEEN Program remain focused on the objectives and program scope set forth in 49 U.S.C §47511: reducing fuel burn, emissions, and noise through the development, maturation, and testing of certifiable aircraft and engine technologies and jet fuels for civil subsonic airplanes.

CARB strongly urges the FAA to set explicit energy efficiency, nitrogen oxides (NOx), particulate matter (PM), and carbon dioxide (CO2) targets for the CLEEN Phase IV Program.[1] CARB advises that FAA retains the 70% NOx target as a baseline as implemented in the CLEEN Phase III, and institute a target of 80% NOx reduction (relative to CAEP/8). Establishing this advanced NOx target is critical for the successful implementation of measures in California's 2022 State Strategy for the State Implementation Plan, which is designed to achieve the 2015 8-hour ozone standard as required under the federal Clean Air Act[2]. Additionally, CARB urges FAA to set CO_2 reduction goals beyond the current aircraft CO_2 standard, and to align with ICAO's CORSIA program aimed at capping aviation CO_2 emissions at 85% of the 2019 level.

Since its inception, the CLEEN Program has received substantial FAA investment, approximately $225 million across Phase I and II[3], and $125 million in Phase III[4], matched

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[1] In its December 2022 CLEEN IV market survey, FAA proposed targets of a 35% improvement in aircraft energy efficiency relative to CAEP/10, a 70% reduction in landing-and-takeoff-cycle (LTO) nitrogen oxide (NOx) emissions relative to CAEP/8, and a 50% reduction in particulate matter (PM) relative to CAEP/11, while limiting other emissions. *Market Survey Capacity Assessment for: Continuous Lower Energy, Emissions and Noise (CLEEN) Phase IV Technology Development*.

[2] 2022 State Strategy for the State Implementation Plan. *https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf*

[3] *FAA Awards $100M to Develop Next Generation of Sustainable Aircraft Technology.*

[4] *NextGen Annual Report Fiscal Year 2023.*

1:1 by industry cost-sharing. In contrast, Phase IV is only allocated $25 million. CARB strongly urges the FAA to significantly increase funding for the CLEEN Phase IV Program to ensure its success. Sufficient funding and clear, measurable aircraft engine NOx targets are instrumental to the program's ability to accelerate development and adoption of lower-NOx engine technologies.

Like many regions across the nation with major airport hubs and high air traffic, California is grappling with severe air pollution from aircraft. These pollutants, including NOx and PM, create smog and tiny particles that trigger asthma, harm the heart and lungs, and contribute to premature mortality[5]. More than half of Californians, over 21 million out of nearly 40 million, live in areas that exceed the federal ozone standard and suffer from the adverse health effects of ozone. California's aircraft activity is projected to increase by approximately two-thirds between 2024 and 2050[6]. Without technology-forcing emission standards, this surge in aircraft activity is expected to push NOx emissions up by almost 30%, from 55 to 71 tons per day, while emissions from all other mobile source sectors are projected to decline[6]. This trajectory underscores the importance of achieving substantial reductions in aircraft-related emissions to support attainment of federal air quality standards, especially in regions with significant aviation activity.

CARB appreciates the opportunity to provide feedback to the FAA. Efforts like the CLEEN program, combined with national measures and coordination among states, local districts, airports, and industry, will strengthen both domestic and international progress toward cleaner air objectives.

If you have any questions or would like more information, please contact Mo Chen, Manager of the Mobile Source Technology Assessment and Modeling Section, at *mo.chen@arb.ca.gov*.

Sincerely,

Matthew Lakin Digitally signed by Matthew Lakin
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Matthew Lakin, Chief, Air Quality Planning and Science Division

cc: Mo Chen, Manager, Mobile Source Technology Assessment and Modeling Section

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[5] U.S. Environmental Protection Agency. *Air Pollution and Health Effects – Particulate Matter and Ozone. https://www.epa.gov/advance/health-effects-ozone-and-particulate-matter*

[6] California Aircraft Emissions Inventory Model (CAI2024). *https://ww2.arb.ca.gov/sites/default/files/2024-12/CAI2024_main_document_1211_ada.pdf*