

To: Gina McCarthy, White House National Climate Advisor
Michael Regan, EPA Administrator
CC: Steve Dickson, FAA Administrator

Re: Opportunities for US leadership on aviation GHG emissions

Dear National Climate Advisor McCarthy and Administrator Regan:

We are writing to draw your attention to new policy opportunities to control greenhouse gas (GHG) and co-pollutant emissions from U.S. aviation. To address this large and growing source, and in order to show leadership at the International Civil Aviation Organization (ICAO), we recommend that the U.S. Environmental Protection Agency (EPA) immediately launch an effort to establish a GHG regulation for in-service aircraft engines and begin work on tighter 2030+ GHG and criteria pollutant standards for new aircraft engines.

Transportation is the largest GHG source in the US, with co-emissions of particulate matter (PM), nitrogen oxides (NO_x), and volatile hydrocarbons impacting local air quality and public health nationwide. The U.S. aviation sector is the largest in the world; passenger flights departing US airports emitted almost 180 million tonnes (Mt) of carbon dioxide (CO₂) in 2019, about one-quarter of the global aviation total and a 19% increase since 2013.

Moreover, short-lived climate pollutants and precursors like NO_x and black carbon emitted from aircraft at altitude may trigger twice as much global warming as CO₂ alone. Without further action airlines [could consume one-quarter](#) of a 1.5-degree Celsius carbon budget by 2050. And air pollution from planes at and near ground-level harm communities near airports, whose residents are disproportionately low-income and people of color, raising concerns about equity and environmental justice.

The good news is that industry has begun to rise to the climate challenge. Since 2019, there has been a resurgence in interest in zero emission aviation, including e-kerosene synthesized from renewable electricity, hydrogen-fueled designs being developed by [Airbus](#) and [ZeroAvia](#), and electric aircraft under design by startups like [Eviation](#), [Heart Aerospace](#), and [Wright Electric](#). Airline associations, including Airlines for America, have committed to [net-zero emissions by 2050](#) while individual carriers like American Airlines are working to establish mid-term targets under the Science-Based Target initiative (SBTi).

In tandem, governments worldwide are moving to support those targets with concrete policies. Examples include mandates for sustainable aviation fuels (SAFs, in the European Union and United Kingdom), carbon pricing mechanisms (EU, UK, and Canada), integrating aviation emissions in legally binding carbon budgets (UK), and halting airport expansion and phasing out short-haul flights that compete with high-speed rail (France, Switzerland).

There is much to be accomplished in the US. The latest US policy, as outlined in the recent "[Sustainable Aviation Fuel Grand Challenge](#)", favors aspirational goals and SAF tax credits over legally binding GHG targets. We cannot depend on financial incentives alone to deliver the necessary emissions reductions in the timeframe needed.

Under the Trump administration, EPA finalized a carbon dioxide (CO₂) emission standard for new aircraft engines. The rule is explicitly technology-following and, by [EPA's own admission](#), will not reduce emissions from aircraft. Instead, EPA projects that aircraft GHG emissions will increase by [40 to 53% through 2040](#) under the rule. [Independent research](#) has concluded that the standard lags state-of-the-art technology by more than a decade. As a result, in January 2021 12 states plus the District of Columbia, representing [half of US aviation CO₂](#), filed a lawsuit requesting its review.

We, the undersigned, are writing to urge the administration to issue new aircraft CO₂ and criteria pollutant standards under the Clean Air Act. We have the following recommendations. As a threshold matter, the U.S. should stop outsourcing aircraft emissions policy to ICAO. Historically, that organization has interpreted its role to recommend technology-following standards that rubberstamp the aircraft and engines that manufacturers have already developed. This approach, following seven years of closed-door meetings held with zero public input, generated the do-nothing CAEP/10 CO₂ standard that is now under review by this administration. Lacking decisive U.S. action, we expect that future standards developed within ICAO will also fail to promote new technology.

Instead, we recommend a two-pronged approach to curbing GHG emissions from U.S. airlines. First, EPA should immediately initiate a rulemaking to apply ICAO's CAEP/10 standard to in-service aircraft operated at U.S. airports. This approach would reduce near-term emissions and is permissible under both the Clean Air Act and the Chicago Convention. The U.S. previously used this "phase out" approach to retire older aircraft that failed [Stage 1 and Stage 2 noise limits](#). A similar approach for CO₂ would promote fuel efficiency retrofits and accelerate fleet turnover, in turn supporting new markets for lower emitting airframes and engines.

Second, EPA should initiate public rulemakings for more stringent CO₂ and criteria (NO_x and PM) pollutant standards for new aircraft engines entering into service in or after 2030. This standard would support U.S. climate leadership at ICAO, in the same way that Climate Envoy John Kerry's call for [absolute zero emission shipping by 2050](#) has re-energized negotiations at the International Maritime Organization.

As part of that rulemaking, EPA should seek public comment on flexibility mechanisms like averaging and banking (A&B) that might enable more ambitious and cost-effective standards. Given EPA's current staffing constraints, we encourage the White House to establish a blue-ribbon panel of experts to help assess emerging technologies to support new standards. Signatories to the letter, including research staff at the International Council on Clean Transportation (ICCT), would support that effort.

In addition to this two-pronged approach, we encourage the U.S. to pursue new measures to improve transparency, reduce conflicts of interest, and to allow greater participation in efforts to control aviation emissions. These include establishing a public review and comment process on the U.S. position at ICAO's next environmental committee meeting (CAEP/12) and working with Secretary General Juan Carlos Salazar to improve ICAO accountability and transparency. EPA should also consider requiring airlines to disclosure emissions on a per flight basis to the

flying public, as being considered [now in the United Kingdom](#). These actions could be supported or led by the Federal Aviation Administration or State Department to help manage EPA's administrative burden.

This letter highlights persistent gaps in how the U.S. regulates aviation emissions. The undersigned acknowledge that ground-based transport (on and off-road vehicles) emit more to air and GHG pollution than aircraft, and that EPA is also under significant demand for rulemakings related to those sources. Many of the undersigned have urgently advocated to curb pollution from heavy-duty vehicles, locomotives, and off-road engines. We continue to urge federal action to establish zero emission requirements, stringent GHG and criteria pollution standards, and funding for demonstration and deployment of zero emission vehicles and engines and infrastructure to support them. The approach proposed above provides a menu of short, mid, and long-term actions on aircraft that EPA can use to prioritize around those obligations.

Collectively, these actions would serve as a demonstration of American leadership on climate change and alleviate some of the worst environmental injustice in our nation. They would also support President Biden's commitment to a net-zero economy and position U.S. industry to win new aviation markets. Continued federal inaction, conversely, risks ceding new markets to international competitors and will make even existing U.S. goals, including that of [capping CO₂ emissions from US airlines at 2005 levels starting in 2020](#), impossible to achieve.

Respectfully yours,

RICHARD W. COREY
Executive Officer
CALIFORNIA AIR RESOURCES BOARD

JASON E. JAMES
Assistant Attorney General
STATE OF ILLINOIS

MAURA HEALEY
Attorney General
COMMONWEALTH OF MASSACHUSETTS

KEITH ELLISON
Attorney General
STATE OF MINNESOTA

ELLEN F. ROSENBLUM
Attorney General
STATE OF OREGON

ANDREI KODJAK
Executive Director
INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION