To: Gina McCarthy, White House National Climate Advisor
CC: Jennifer Granholm, Secretary of Energy; Tom Vilsack, Secretary of Agriculture; Pete Buttigieg, Secretary of Transportation; Billy Nolen, FAA Acting Administrator; Michael Regan, EPA Administrator

Re: Crop-based Biofuels under the Sustainable Aviation Fuel Grand Challenge

Dear National Climate Advisor McCarthy:

We write regarding the Biden Administration's efforts to reduce greenhouse gas (GHG) emissions from U.S. airlines. While we support its overall goal, we are concerned about moves to promote crop-based biofuels under the "Sustainable Aviation Fuel Grand Challenge", particularly for the blender's tax credit being considered by Congress. Without proper safeguards, those fuels could undermine President Biden's goal of reducing U.S. GHG emissions by 50% in 2030, trigger substantial land-use impacts and food price inflation, and disadvantage U.S. industry in new markets for low-carbon aircraft and hydrogen-based fuels.

For sustainable aviation fuels (SAFs) to play a key role in decarbonizing flight, they must have low life-cycle emissions and adhere to widely accepted sustainability criteria established by the International Civil Aviation Organization (ICAO). These safeguards are particularly necessary for crop-based biofuels, which can trigger large land-use impacts and indirect emissions through the conversion of natural ecosystems. Based on our understanding of the SAF Grand Challenge, the risk of promoting those fuels over higher quality SAFs seems high.

We strongly support the SAF Grand Challenge's requirement that SAFs reduce life-cycle GHGs by at least 50% compared to conventional fuel; however, how those emissions are calculated is as important as the GHG savings threshold itself. Setting a clear policy signal for low-carbon, high-integrity SAFs, such as those made from wastes, residues, and renewable electricity, for the Grand Challenge's 2030 target is a necessary step towards ensuring deeper decarbonization of the aviation fuel mix in 2050.

Unfortunately, evidence suggests that the Administration is willing to relax standards in order to maximize the volumes of SAF counted towards the goal. For example, at the suggestion of agricultural interests, the initial eligibility criteria for the proposed SAF tax credit pushed by the Administration and Congressional allies diverges from international life-cycle assessment (LCA) standards that adequately account for induced land-use change. The U.S. EPA, which has substantial expertise in life-cycle assessment of alternative fuels, appears to be sidelined in the Administration's Memorandum of Understanding.

We believe that relying on first-generation, food-based biofuels to rapidly develop U.S. SAF markets is misguided, counterproductive, and creates an expensive and risky distraction from long-term aviation decarbonization. We note that, according to international guidelines developed with substantial input from U.S. agencies and industry, SAFs produced from U.S. corn and soy feedstocks fall short of the required 50% GHG reduction relative to petroleum jet fuel

after accounting for direct and indirect land-use change. Corn alcohol to jet pathways fail to generate even a 20% GHG savings using default values. These figures highlight the risk the administration would be taking in supporting these fuels without requiring proper safeguards.

The existing Renewable Fuel Standard (RFS) in particular highlights the risk of promoting crop-based biofuels as a means to accelerate advanced fuel production. Congress's General Accounting Office concluded in 2019 that the RFS increased food prices, provided little to no GHG benefit, and failed to promote advanced biofuels made from cellulosic wastes. Furthermore, new research has concluded that the RFS led to a net ***increase*** in GHG emissions compared to petroleum fuels due to accelerated land conversion. The technologies used to produce first-generation food-based biofuels simply do not provide a technological steppingstone to the advanced biofuels necessary to drive deeper decarbonization. It would be tragic to repeat the mistakes of the RFS under the SAF Grand Challenge.

Diverting crops to jet fuel production could also exacerbate food price shocks for consumers. Already, about one-third of U.S. corn and soy production is used to generate ethanol and renewable diesel; producing the SAF Grand Challenge's goal of 3 billion gallons of jet fuel would require half of all U.S. soy production, equivalent to 90% of 2020 exports. Such food-to-fuel diversion would likely exacerbate today's run-up in food prices—which increased by 8% from February 2021 to January 2022 and which continues today.

Finally, promoting crop-based biofuels risks disadvantaging US industry in new international markets for low-carbon aircraft and fuels. The European Union is finalizing a SAF mandate that would exclude crop-based biofuels completely in order to promote only the highest quality SAFs made from advanced biofuels and renewable hydrogen ("e-kerosene"). This coincides with a renewed interest in zero-emission aviation, including hydrogen-fueled technologies being developed by Airbus, Boeing, and ZeroAvia, and electric aircraft under design by startups like Eviation, Heart Aerospace, and Wright Electric. U.S. policy should support these technologies, which will have the widest international acceptance and largest foreign markets, rather than pushing niche fuels that are unlikely to gain worldwide support.

For these reasons, we, the undersigned, urge the Biden administration to refocus the SAF Grand Challenge to (1) ensure that any qualifying SAF meet – and is certified to comply with – ICAO's Sustainability Criteria for CORSIA Eligible Fuels and other relevant traceability requirements; (2) require that SAFs qualifying for the 2030 target provide at least a 50% reduction in life-cycle GHG emissions using ICAO's default induced land-use change values 3) ensure that feedstocks that cause or contribute indirectly to the loss of natural habitats, including forests, grassland, or wetlands, are not eligible for financial support; and 4) reduce its volumetric goal to align better with the availability of advanced SAFs that deliver large reductions in life-cycle GHG emissions.

Meeting ICAO's sustainability criteria will help avoid tradeoffs like the conversion of high carbon stock ecosystems for cropland, the depletion of water resources, degradation of water, soil and air quality, and other harms related to food security, conservation, waste, and pesticide

use. Likewise, avoiding feedstocks prone to indirect land-use change emissions will safeguard against negative effects on ecosystems and communities worldwide. Finally, since advanced fuels will require additional time to mature, we recommend a target of 1.5 billion gallons of biogenic SAF in 2030. This is approximately 5.5% of FAA's forecast 2030 demand, and aligned with Europe's proposed SAF mandate. Producing this volume of high-integrity, low GHG intensity SAF would provide larger climate benefits than a higher volume target composed of inferior fuels.

If the Administration instead chooses to ignore ICAO's LCA framework, we propose that crop-based biofuels should be excluded altogether from the SAF Grand Challenge. Work to promote clean fuels should be accompanied by ambitious, achievable aircraft CO_2 standards to accelerate investments in fuel efficiency that align fuel demand with SAF supply.

Thank you for your consideration. Should you have any questions regarding this letter, please reach out to Nikita Pavlenko (n.pavlenko@theicct.org) or Dr. Dan Rutherford (dan@theicct.org).

Respectfully yours,

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