SUSTAINABLE AVIATION FUEL: FEDERAL POLICY RECOMMENDATIONS TO ENABLE A LOW-CARBON FUEL MIX (FACTSHEET)

C2ES CENTER FOR CLIMATE AND ENERGY SOLUTIONS

In October 2023, the Center for Climate and Energy Solutions (C2ES) established the Sustainable Aviation Fuel Technology Working Group – one of four technology working groups focused on developing policy solutions that enable the deployment and commercialization of critical-path technologies. This group convenes leading experts across the aviation ecosystem, including SAF producers, airlines, transportation infrastructure and logistics experts, investors, corporate buyers of SAF, and members of C2ES's Business Environmental Leadership Council (BELC). Recognizing the diversity of feedstocks and pathways capable of producing SAF, the working group supports the production of all forms of low-carbon SAF, with a particular focus on emerging technologies that have yet to reach established production capacity, such as alcohol-to-jet SAF and e-SAF (also known as power-to-liquid SAF). Informed by working group discussions, C2ES has produced the following shortlist of specific actions the federal government can take to help unlock widespread adoption of a diverse, low-carbon fuel mix in the aviation sector.

BACKGROUND

Around the world, the aviation industry projects major growth in air travel. In response to growing demand and rising emissions, global economies across Europe and Asia are positioning themselves to gain an early foothold in the sustainable aviation fuel (SAF) market. The definition of SAF varies significantly depending on context with most statutory definitions, including criteria on carbon intensity, environmental safeguards, or feedstocks. In general, SAF is a jet fuel which is produced from non-petroleum feedstocks as a biofuel or hydrogen-based synthetic fuel.

The value proposition of American SAF is three-fold: its total lifecycle emissions are lower than fossil jet fuel, it can be produced domestically, and it is certified for use in today's aircraft. In the United States, SAF production volumes have increased from about 5 million gallons in 2021 to nearly 15 million gallons in 2023. Despite this, imported SAF volumes through June of 2024 significantly outpaced estimated domestic volumes. To fully leverage the energy, agriculture, and technology resources of the United States, Congress must be prepared to react to a new and dynamic energy market for aviation fuel.

1. EXTEND TAX CREDITS FOR SAF PRODUCTION

Congress should extend production-based tax credits, inclusive of a floor price, to cover at least 10 years from when a SAF production facility is placed in service.

Existing tax credits are only available for a short period of time and the value of each credit is uncertain. The 40B Sustainable Aviation Fuel Credit is only available for SAF produced in the years 2023 and 2024. The 45Z Clean Fuel Production Credit will only be available for three years (2025-2027). Furthermore, tax credits should apply a floor value for SAF which meets minimum emission reduction requirements and provides a more certain return on investment.

2. UPDATE THE RENEWABLE FUEL STANDARD

The Renewable Fuel Standard (RFS) should be updated to ensure the eligibility of (i.e., power-to-liquid SAF) as a renewable fuel and allow producers to account for lifecycle emissions reductions from the deployment of carbon capture technology.

The implementation of these updates would improve the fitness of the RFS to properly accommodate and fairly credit the production of SAF in the absence of a technology-neutral Clean Fuel Standard.

3. FUND ADDITIONAL DEMONSTRATION AND PIONEER PRODUCTION PROJECTS

Congress should provide additional funding and support to first-of-a-kind and demonstration SAF production facilities to accelerate the commercialization of advanced SAF pathways.

In doing so, Congress should provide annual funding to the Fueling Aviation's Sustainable Transition discretionary grant program (FAST-SAF) and provide additional resources to the Department of Energy (DOE) in support of grants under the Bioenergy Technologies Office (BETO). A SAF-specific funding pool should be created for SAF-related loans and loan guarantees under the agency's Loan Programs Office (LPO).

4. FEDERAL ECONOMY-WIDE CARBON PRICING AND AUTHORIZE THE IMPLEMENTATION OF THE CARBON OFFSETTING AND REDUCTION SCHEME FOR INTERNATIONAL AVIATION

The administration and Congress should examine options and work towards enacting an economy-wide market-based carbon pricing program that would contribute to the achievement of net-zero emissions by 2050.

Revenue generated from a carbon price could in part be used to support SAF specifically, or for other purposes such as lowering government deficits or reducing taxes. Separately, Congress should confer to the U.S. Department of Transportation the authority to implement the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) in the United States to require that U.S. airline operators monitor and report international aviation emissions under the FAA CORSIA Monitoring, Reporting, and Verification (MRV) Program and compensate for their emissions growth as required under the CORSIA program.

Please click *here* to explore the full brief of C2ES's SAF policy recommendations, developed by C2ES in consultation with more than **35 companies across the SAF ecosystem.**

https://www.c2es.org/document/sustainable-aviation-fuel-policy-recommendations-to-enable-a-low-carbon-fuel-mix/

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The Center for Climate and Energy Solutions (C2ES) is an independent, nonpartisan, nonprofit organization working to secure a safe and stable climate by accelerating the global transition to net-zero greenhouse gas emissions and a thriving, just, and resilient economy.