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GrowthEnergy.org

April 4, 2022

Joseph Goffman  
Principal Deputy Assistant Administrator  
Office of Air and Radiation  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue  
Washington, DC 20460  
Docket ID No. EPA-HQ-OAR-2019-0660

**RE: Control of Air Pollution from Aircraft Engines: Emission Standards and Test Procedures**

Dear Mr. Goffman:

Thank you for the opportunity to comment on the agency's proposed particulate matter (PM) emission standards and test procedures for jet engines. Growth Energy is the largest renewable fuel organization in the world representing 89 of the most innovative biofuel producers and thousands of biofuel supporters. Our diverse membership is energized by this new aviation frontier to help the U.S. meet aggressive climate and pollution reduction goals in the hard to electrify sector.

As the proposal and studies show, there are numerous negative health and environmental impacts from PM emissions from combustion in mobile sources. Low-carbon, plant-based biofuels are among the best and most cost-effective options for reducing both PM and greenhouse gas emissions in mobile sources including the aviation sector.

U.S.-based airlines used more than 18 billion gallons of jet fuel in 2019<sup>1</sup>. Accessing the aviation market through ethanol to sustainable aviation fuel (SAF) provides America's bioethanol industry the opportunity to be utilized in more than just light-duty cars and trucks all while contributing to the rural economy and improving air quality.

As we have already seen with higher biofuel blends and light-duty vehicles, the use of sustainable aviation fuel (SAF) holds tremendous potential for reducing air pollution and improving our air quality. Ethanol to jet fuel as SAF has the potential to replace 50% of the petroleum used in jet fuel. While, thus far, the discussion has focused on the ability of SAF to

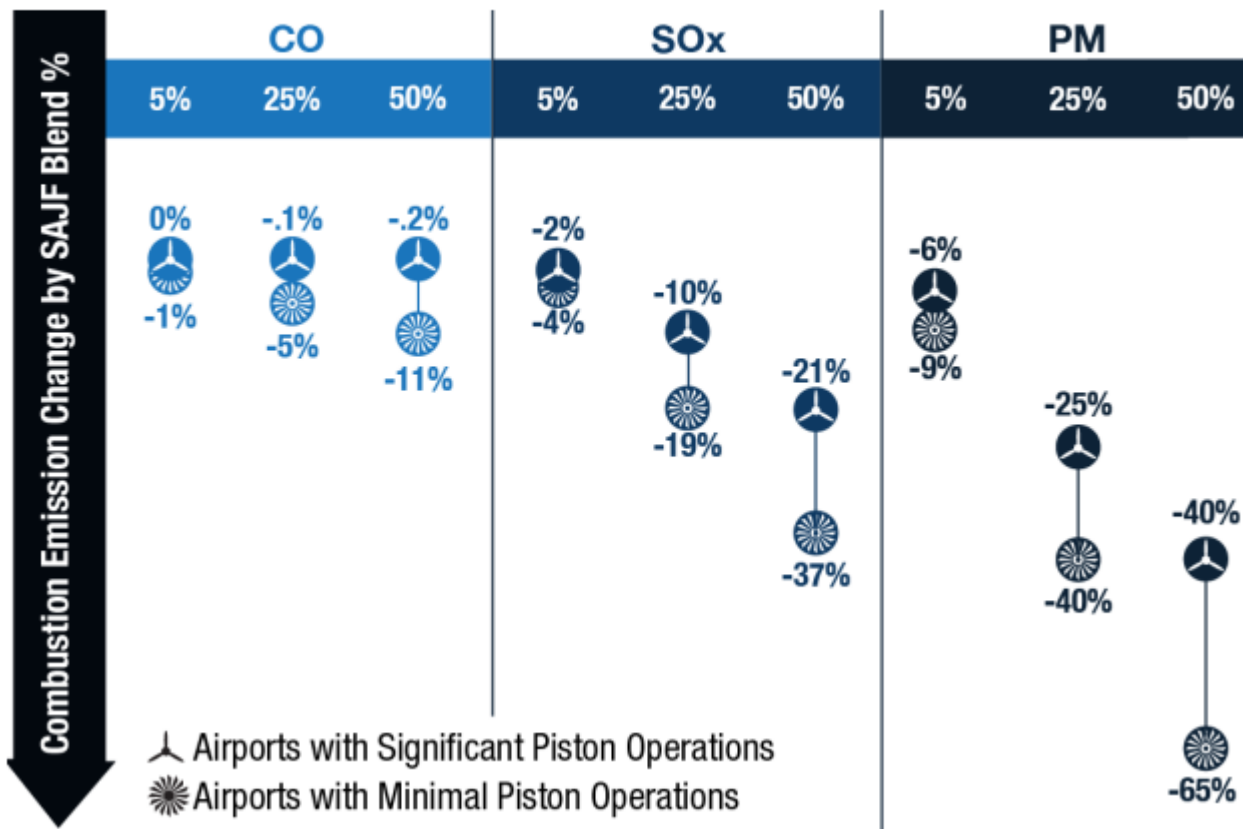
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<sup>1</sup> "Airline Fuel Cost and Consumption (U.S. Carriers - Scheduled)," Bureau of Transportation Statistics: [OST R | BTS | Transtats](#).

significantly reduce greenhouse gas emissions to address climate change. However, there has been a great deal of research to show the reductions in other harmful pollutants through the expanded use of SAF including for this comment, PM emissions.

A recent project from the Airport Cooperative Research Program for the National Academies of Science, Engineering, and Medicine on alternative jet fuel emissions, compiled SAF emissions data from 51 technical publications and then validated the expected results.<sup>2</sup> The in-depth analysis shows that at a 50% blend, SAF can reduce PM emissions by nearly 70%, sulfur by 37%, and carbon monoxide by 11%. These are meaningful reductions that would be a win-win-win for our environment, human health, and for our rural economy.

## Emissions Changes and Air Quality Impacts



Source: National Academies of Science, Engineering, and Medicine: “State of the Industry Report on Air Quality Emissions from Sustainable Alternative Jet Fuels”

With the appropriate investment in critical research and development, and the right policy environment, our industry can work to remove these harmful emissions from our aviation fleet. However, to achieve the Biden Administration’s goal of three billion gallons of SAF production by

<sup>2</sup> National Academies of Science, Engineering, and Medicine, “State of the Industry Report on Air Quality Emissions from Sustainable Alternative Jet Fuels”, April 2018: [State of the Industry Report on Air Quality Emissions from Sustainable Alternative Jet Fuels | Blurbs New | Blurbs | Publications \(trb.org\)](#)

2030 and 35 billion gallons by 2050 to achieve net-zero GHG emissions in aviation, we will need game-changing solutions.

To make our emission reduction goals a reality, we need a healthy and thriving biofuel industry to be able to make the long-term investments in research and development. Specifically, we offer several important recommendations for the agency:

1. A strong and growing Renewable Fuel Standard (RFS): To reach the volumes being discussed, it is critical to have the solid foundation of the RFS. As we recently outlined in our submission, the agency must move as quickly as possible to fix the flaws and finalize its proposed renewable volume obligation (RVO) for 2020 – 2022 and continue robust growth in renewable fuels into the future.<sup>3</sup>
2. Accurate life-cycle emissions modeling: We strongly support the use of the Department of Energy’s Argonne National Laboratory’s GREET model which appropriately accounts for innovations in American agriculture and biofuel production. Use of the GREET model is best suited to assess American-made SAF from bio-based feedstocks.
3. Prioritizing Fuel Quality: As the agency considers PM emission standards for aircraft engines, it should examine and prioritize the benefits that can be achieved through the use of SAF. As has been researched, simply working to expand and maximize the use of SAF can significantly improve air quality and reduce PM emissions.

The biofuel industry stands ready to work with EPA and the Biden Administration to meet our national commitments of aggressive emission reduction goals while supporting economic development, working families, and renewable energy. With forward-leaning policies that support innovation and access to new markets, our industry can provide aviation fuels that will decrease emissions, create more clean energy jobs, and spur economic activity in rural communities today and well into the future.

Thank you for your consideration.

Sincerely,



Chris Bliley  
Senior Vice President of Regulatory Affairs  
Growth Energy

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<sup>3</sup> Growth Energy, “Comments on EPA’s Renewable Fuel Standard (RFS) Program: RFS Annual Rules”, February 4, 2022: [Growth-Energy-RVO-Comment Exhibits.pdf \(growthenergy.org\)](https://www.growthenergy.org/Growth-Energy-RVO-Comment-Exhibits.pdf)