TAMMY DUCKWORTH
U.S. SENATOR FOR ILLINOIS

Sustainable Aviation Fuels Accuracy Act of 2023

Senators Tammy Duckworth (D-IL) and Deb Fischer (R-NE) joined by Joni Ernst (R-IA), Amy Klobuchar (D-MN) and Charles Grassley (R-IA) introduced the bipartisan *Sustainable Aviation Fuels Accuracy Act of 2023* to identify the standards required to meet the definition of Sustainable Aviation Fuel (SAF) at the Federal Aviation Administration (FAA).

BACKGROUND:

SAF delivers the performance of petroleum-based jet fuel but with a fraction of its carbon footprint and holds the potential to enable the aviation industry to decouple greenhouse gas (GHG) emissions from air travel. Importantly, SAF is a "drop-in" fuel, meaning it is compatible with existing aircraft in a commercial air carrier's fleet. In addition to reducing lifecycle GHG emission levels by up to 80 percent, NASA has determined that 50 percent aviation biofuel mixture can cut particulate emissions caused by air traffic by 50 to 70 percent.

The majority of commercially-viable SAF is derived from biofuels, or biomass derived fuels, using plants or waste. The United States is a top SAF producer because of the abundance of American grown crops and crop waste. SAF empowers American farmers and the U.S. agriculture sector to help our Nation transition to a clean energy economy. Critically, powering the commercial aviation industry with U.S.-grown biofuels also enhances national security by reducing reliance on foreign oil sources, from countries such as Russia and Saudi Arabia.

With commercial air travel demand expected to rise, there has been broad recognition across the private and public sectors that the aviation industry must invest in technological innovation and SAF to reduce emissions. For example, United Airlines established a goal of achieving net-zero emissions by 2050 and the widespread adoption of SAF is a critical component of its strategy to meet its objective. The U.S. Departments of Energy, Agriculture and Transportation also partnered together to develop the comprehensive "SAF Grand Challenge Roadmap" strategy. The Biden administration launched this interagency initiative to spur a national effort to achieve the ambitious goals of producing 3 billion gallons of SAF by 2030, and producing enough SAF to satisfy 100 percent of the commercial jet fuel demand by 2050.

PROBLEM:

Life-cycle analysis (LCA) models are used to calculate the percentage lifecycle GHG emissions reductions achieved by a specific type of SAF. The U.S. Department of Energy's Argonne National Laboratory established the gold standard for LCA of technologies and energy systems: the Greenhouse Gases, Regulated Emissions and Energy Use In Technologies (GREET) model. GREET is effective as a LCA model for SAF because it accurately accounts for technological advancements and climate-smart agricultural practices that reduce the carbon intensity of feedstock production, enhance sustainability and enable the agricultural sector to lower carbon emissions.

Despite recognition that the gold standard for SAF LCA modeling was created in the United States by researchers at one of the U.S. Department of Energy's crown jewels of innovation, Argonne National Laboratory, Federal law has only directly acknowledged an inferior LCA model adopted by the International Civil Aviation Organization (ICAO), known as the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) model. Unlike GREET, ICAO's CORSIA relies on outdated, static data published between 2007 and 2012—including old GREET data—and adopts an averaging approach.

CORSIA's lack of precision and relative inaccuracy compared to GREET is particularly evident in the model's failure to account for advances over the past decade in reducing the carbon intensity of biofuels by at least 20 percent, and likely more. In stark contrast to ICAO's CORSIA model, Argonne National Laboratory researchers have updated GREET at least five times over the past nine years to make sure this LCA model follows the best available data and science to assess direct emissions. Importantly, GREET include data derived from real world field testing and validation techniques and includes climate-smart agricultural practices and scientific innovations.

SOLUTION:

The bipartisan Duckworth-Fischer-Ernst-Klobuchar *Sustainable Aviation Fuels Accuracy Act of 2023* would identify the standards required to meet the definition of SAF at the FAA by:

- Requiring the Federal Government adopt the most up-to-date lifecycle emissions models, including, GREET or successor LCA models to GREET;
- Preventing the Federal Government from picking winners and losers in the SAF market; and
- Clarifying that the United States Government does not encourage the banning of agricultural feedstocks from being utilized as a viable source of SAF.

Without policy that encourages the use of LCA models that accurately measure carbon reduction in agriculture, there will be no incentive for farmers to implement and expand sustainable practices, and this will ultimately harm efforts to increase SAF production to decarbonize our commercial aviation industry.

There is no viable future for SAF without biofuels. Failing to invest in and support biofuels SAF will guarantee failure in achieving the SAF Grand Challenge goals, and worst of all, prevent commercial air carriers from rapidly accelerating their adoption of proven drop-in SAF sources that are the only viable pathway towards achieving net-zero emissions in the coming years.

The bipartisan Sustainable Aviation Fuels Accuracy Act of 2023 is endorsed by the following organizations: *Clean Fuels Alliance America, United Airlines, Renewable Fuels Association, Growth Energy, National Corn Growers Association*