

Biden Plan Calls for Carbon Neutral Jet Fuel by 2050 With Eye Towards Biofuels

Alert

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A recently-issued multi-agency report highlights a path for the U.S. government to replace fossil fuel-based jet fuel with renewable sources to address climate change and encourage infrastructure development. The U.S. Department of Energy, Department of Transportation, and Department of Agriculture, with input from the U.S. Environmental Protection Agency, unveiled their Sustainable Aviation Fuel (SAF) Grand Challenge Roadmap on September 23, 2022.

The Roadmap calls for significant investments in the agriculture and transportation industries to achieve carbon neutral jet fuel targets as well as other climate change mitigation goals. It also highlights how the Biden administration expects to reach its goals of reducing total greenhouse gas emissions from aviation fuel by 50% by 2030 and achieving a national production capability of 35 billion gallons of SAF annually by 2050 to supplant all projected aviation fuel needs. The administration's 2030 goal would require the country to increase its production of SAF up to 3 billion gallons per year.

SAF refers to liquid hydrocarbon airplane fuel made from renewable agriculture products or waste resources. Like other “drop-in” fuels, SAFs are interchangeable with conventional aviation fuel and can be transported using the same transmission methods for traditional fuel such as existing pipeline infrastructure. The Roadmap outlines six action areas to encourage SAF development and use:

1. More research and development in feedstock innovation to increase the production of ethanol and isobutanol
2. Incentivizing the creation of new commercial refineries to transform hydro-processed esters, fatty acids, and other organic wastes into SAFs. Particular emphasis is placed on improving conversion technology so more SAF components can be extracted without requiring the planting of additional

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acres of crops

3. Expanding supply chains to connect farms, processing facilities, and waste generators to future SAF markets. The Departments expect the first step in this action area to be convening regional consortia of businesses and interest groups.
4. Developing analytical tools and data collection procedures to inform public policy and evaluate SAF investment efforts. This action area envisions new life cycle greenhouse gas modeling with supporting peer-reviewed research.
5. Break down the regulatory and logistical barriers that prevent end users in the airline industry from using SAFs. The intent is to streamline SAF production and approval processes under ASTM International protocols.
6. Communicating with stakeholders to enhance the presence of SAF in the public consciousness and promote the industry. Such communications will include public listening sessions, interagency sharing of information, and an online-based resource guide for funding opportunities.

The Departments will update the Roadmap every two years to account for any progress and knowledge gained for each action area. None of these action areas offer specific legislative proposals or funding mechanisms to reach SAF production goals, which raises reasonable doubt that the country will reach the Departments' goal of 3 billion gallons of SAF annually in less than eight years. For reference, the United States currently produces approximately 4.5 million gallons of SAF per year.

However, these action areas are nonetheless useful to foresee what policy initiatives the Biden administration will send to Congress. If recent federal activity in the Infrastructure Investment and Jobs Act and Inflation Reduction Act are any indication, we should expect proposals to create new [tax credit](#) and [rebates](#) incentives, as well as future federal funding opportunities for institutions of higher education, non-governmental organizations, and private individuals. The Inflation Reduction Act already included a \$290 million grant program for SAF programs and tax credits for SAF producers and fuel blenders.

Any forthcoming legislation will most likely target industries that produce the base components for SAFs such as forestry, industrial waste handlers, solid waste disposal sites, and agricultural sectors. Because the Roadmap expects lipid-based products (i.e. fats, oils, and greases) to be the primary source for SAF advancements to meet the 2030 goal, federal agencies will likely focus on oilseed crops such as canola and soybeans. The Departments also may propose programs that create secondary value for established products or resources with relatively limited value. For instance, the Roadmap notes that the country can take advantage of insect-damaged conifer forests that may otherwise not be suitable for lumber, and carbon molecules from industrial emissions can be sequestered and reprocessed for SAF production.

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Stinson's Infrastructure Task Force is continuing to monitor developing federal investment proposals and their potential impact on particular industries, and this includes initiatives that we expect to see once the Federal Aviation Administration releases the reauthorization agenda that it is preparing for 2023.

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