

**REGIONAL ROUNDTABLE:
SCALING SUSTAINABLE AVIATION FUEL IN WASHINGTON:
TAKEAWAYS FROM THE ROUNDTABLE DISCUSSION
April 29, 2024**

Note: Takeaways represent statements made in the roundtable discussion and do not necessarily reflect C2ES positions or opinion, nor do they reflect unanimous support among all participants in the event.

SAF State Policy Landscape

- Washington's recent state policy successes, the culmination of more than a decade of work through the state's Alternative Jet Fuels Working Group, have positioned the state to be a leader on Sustainable Aviation Fuel (SAF) development and utilization. These successes include the 2022 passage of a Clean Fuel Standard, the 2023 passage of SB 5447 to attract investment in SAF production, and HB 1216 to streamline the clean energy siting process. Additional federal policy support can enable even greater support for SAF in Washington and nationally.
- SB 5447 is the only SAF tax credit in the United States which provides the flexibility of allowing it to be claimed by either the producer, blender, or end-user. Stakeholders cite the importance of the credit remaining adaptable to changing conditions as the alternative jet fuel market develops.

SAF Federal Policy Landscape

- To support scaling the entire SAF industry from the earliest stage of production to the end user, the Inflation Reduction Act of 2022 (IRA) created interlocking tax credits that provide incentives to actors across the SAF supply chain. These credits include 40B for SAF blending (ending 2024), 45Z for SAF production (starting 2025), 45V for clean hydrogen production, 48(a)(15)(c) for clean hydrogen facilities, and 45Q for carbon dioxide sequestration. At present, 45Z cannot be stacked at a facility that also uses the other aforementioned credits during the same taxable year.
- Fueling Aviation's Sustainable Transition (FAST) is a federal grant program that provides \$244.5 million to invest in projects that will build out SAF related infrastructure (FAST-SAF) and \$46.5 million to develop and demonstrate new low-carbon aviation technologies (FAST-Tech).
- Federal funding of research and development offices, programs, and labs support the technological development and implementation of SAF. This includes the aviation sustainability center ASCENT, co-led by Washington State University and Massachusetts Institute of Technology to pursue commercial scale SAF production.
- The SAF Grand Challenge is a federal interagency effort designed to identify specific activities that should be undertaken by the government to achieve 3 billion gallons per year of domestic SAF production by 2030 and 100 percent of the projected U.S. aviation fuel demand by 2050. This whole-of-government approach pursues expanded SAF supply and use, reduced cost, and enhanced sustainability for SAF.

Current Challenges Identified by Participants

- The early stage of SAF production is lacking funds both for research and development (R&D) efforts and to bring new production online to increase supply.

- SAF is more expensive to produce than fossil jet fuel (jet-A) and renewable diesel, and existing SAF tax credits are too short in duration to attract private capital investment for new projects, especially “first-of-a-kind” projects.
- There are restrictions on the ability of airports to play a role in supporting the use of SAF at their facilities.
- Decision making is siloed among agencies who are collaborating on the SAF Grand Challenge. There is a need for increased transparency about the progress made on the SAF Grand Challenge among the lead agencies involved in the existing SAF Interagency Working Group (IAG).
- Existing research into the technical feasibility of converting biomass-based feedstocks into SAF is based on ideal feedstock quality. More research is required to understand the implications of sourcing and using feedstocks which may be sub-standard due to degradation, contamination, or other difficult-to-control quality issues.
- Critical SAF infrastructure, such as SAF blending facilities, is currently operated by a small number of companies who can control supply and access to SAF.
- Blending infrastructure needs are unique to different regions depending on whether the airports are served by fuel trucks, shipping, or pipelines.
- Current federal and state permitting complexity and timelines are major impediments to the development of clean energy infrastructure, including SAF-related infrastructure, such as pipelines and blending tanks.

Structure of Roundtable Policy Discussions

In the roundtable event, policy discussions were divided into three categories to identify potential federal policy solutions to support the development of Washington state’s SAF industry. Categories included: (1) Gaps in Federal Policy, (2) Research, Development, and Deployment Needs, and (3) SAF-Related Infrastructure.

The following sections describe policy challenges and recommendations raised in each session. The top two recommendations receiving the greatest level of support from among participants (more than half of participants in favor) are indicated in **bold**. Other recommendations are listed in italics as a record of the conversation but did not receive majority support from participants in the room.

Proposed recommendations with the greatest support will be refined and improved to inform the core policy recommendations participants will bring to federal policymakers.

Addressing Gaps in Federal Policy:

- The current SAF-related tax credits, 40B and 45Z, expire at the end of 2024 and 2027, respectively. These credits only benefit facilities that can produce SAF within that timeframe. The short duration of incentives is not compatible with the time required for proposed new production facilities to secure financing, permits and construction, which can take 5-7 years from initial announcement of a project to begin producing fuel. Creating a longer-duration credit that begins when the facility is placed into service, similar to the 45V credit, would incentivize new investments to increase domestic SAF supply and diversity. Some participants also noted interest in increasing the value for 45Z.
 - **Participants recommended that Congress should extend SAF tax credits to cover at least 10 project years.**

- Airports that receive federal funding are subject to strict requirements on the utilization of both federal funds and airport revenue. Currently, direct purchasing of SAF and infrastructure investments offsite from the airport are considered revenue diversion and are not an appropriate use of funds. In general, revenue diversion, as defined by the Federal Aviation Administration (FAA), is the use of airport revenue for purposes other than airport capital, operating costs, or the costs of other facilities owned or operated by the airport and directly related to air transportation.
 - **Participants recommended that Congress should add SAF investments as an appropriate use of funds for airports to support the commercial uptake of sustainable aviation fuels.**
- Currently, the Secretary of Defense is limited to the bulk purchase of fuels that are cost-competitive with traditional fuels—SAF is still more expensive than jet-A, and therefore not eligible for purchase except when issued a waiver. In order for DoD to procure higher quantities of SAF, the agency would need to be allowed to pay a higher price premium. Historically, the Air Force and Navy have been involved in SAF, but pulled back in recent years. Amending procurement restrictions may help re-energize the role of the DoD in sustainable aviation. *Some participants recommended that Congress allow federal agencies, including the Department of Defense (DoD), to procure SAF, at a limited price premium above the price of Jet-A grade fuel.*

Additional policy recommendations raised by some participants in the Gaps in Federal Policy Workshop included the following:

- *The Office of Clean Energy Demonstrations at DOE should add SAF to its technology focus areas.*
- *Congress should reinvigorate the 9003 loan program through the Department of Agriculture (USDA), otherwise known as the Biorefinery Assistance Program.*
- *Fuels produced with biogenic carbon dioxide should be able to qualify for Renewable Identification Numbers (RINs) under the Renewable Fuel Standard.*

Addressing SAF Research, Development, and Deployment

- The FAST-SAF program was created through the Inflation Reduction Act Section 40007 to provide \$244.53 million for sustainable aviation fuel and \$46.53 million for low emission aviation technologies over five years. When the FAST program was initially proposed, industry advocates identified \$1.5 billion in funding needs. Increasing the total amount of funding available and making this program annual would support increased certainty and resources for expansion of SAF development.
 - **Participants recommended that Congress fund FAST-SAF annually and increase the total amount of funding to at least \$1 billion.**
- Effective progress on the SAF Grand Challenge and other federal SAF initiatives requires agency coordination. Participants described a siloed decision making environment among agencies that would benefit from more formalized coordination and transparency.
 - **Participants recommended that Congress create a specific SAF office in the Department of Energy (DOE) to lead interagency collaboration and implementation.**
- Although a wide range of SAF pathways have received American Society for Testing and Materials (ASTM) certification, approved pathways require additional testing to ensure that SAF products meet DoD technical fuel specifications. Certain fuels (made from the Fischer-Tropsch and HEFA pathways) have been tested and approved for use in some military applications. To encourage SAF

uptake at DoD, participants suggested broadening the types of SAF pathways beyond Fischer-Tropsch and HEFA. Some participants recommended that *Congress should direct DoD to test and approve additional ATSM-certified SAF production pathways for their use in certain military airplanes and supporting fuel infrastructure.*

- There is a need for more research on existing ASTM-approved pathways to improve and boost commercialization of SAF for customers. *Some participants recommended that Congress should appropriate additional funds for research, development, and deployment funding on continuous improvement of existing ASTM-approved pathways.*
- Additional funding should seek to advance our understanding of potential co-benefits of SAF's displacement of fossil jet fuel beyond lifecycle emissions, such as air particulate reduction. A better understanding of these impacts is crucial to understanding potential positive health and environmental impacts for communities, especially those surrounding airports. ASCENT is already conducting much of this work and should continue to be funded to do so. *Some participants recommended that Congress should appropriate additional R&D dollars to be used to quantify benefits of SAF beyond carbon dioxide reduction.*
- DOE's funding process often takes enough time that project approaches and objectives can change somewhat significantly during the course of the application process. Ensuring that grants could be renegotiated to maintain alignment with project outcomes, even if the approach needs to be modified from the original grant funding application, will improve outcomes. *Some participants recommended that, when designing funding programs, Congress and federal agencies should allow the flexible use of government funds as long as the outcome is consistent with the intention of the funding program.*

Additional policy recommendations raised by some participants in the Research, Development, and Deployment workshop included the following:

- *Congress should extend and expand the R&D tech-neutral tax credit.*
- *Congress should fund and direct DOE to lead an intra-agency R&D "crosscut" program, with dedicated line-item funding to ensure coordination and focus for SAF research programs and implementation across the federal government.*
- *Congress should provide funding to build out testing infrastructure, such as test beds, for SAF infrastructure to facilitate its buildout at commercial airports across the country.*

Addressing SAF-related Infrastructure

- Jet-A is primarily transported by pipeline. As SAF volumes scale, integration into existing fuel pipelines and infrastructure will require facilities where SAF and Jet-A can be blended while controlling for quality and blend ratios.
 - **Participants recommended that Congress should establish a funding program to support regional SAF blending facility development.**
- Revenue raised through federal and state taxes on the sale of jet fuel are subject to the same use requirements as other airport revenue, meaning SAF-related infrastructure is not an allowable use of this revenue. Changing these requirements would allow states to designate a portion of tax revenue to support needed infrastructure projects like blending facilities for SAF at or administered by airports.

- **Participants recommended that Congress should allow states to use revenue from aviation fuel taxes to provide funding for airports to support SAF infrastructure projects.**
- *Some participants recommended that Congress should create a state revolving fund to support blending infrastructure for SAF, modeled after the Environmental Protection Agency's (EPA) clean water state revolving fund and administered through DOE.*
- *Some participants recommended that the Federal Energy Regulatory Commission (FERC) and FAA should develop an interagency plan to provide clarity and necessary support for SAF pipelines. This should include a plan to incentivize end users and clarify federal permitting authority.*