



Federal Aviation
Administration

Federal SAF Efforts

Policy and Programs to Decarbonize Aviation

Smoky Mountains Mobility Conference

Hard to Decarbonize Session

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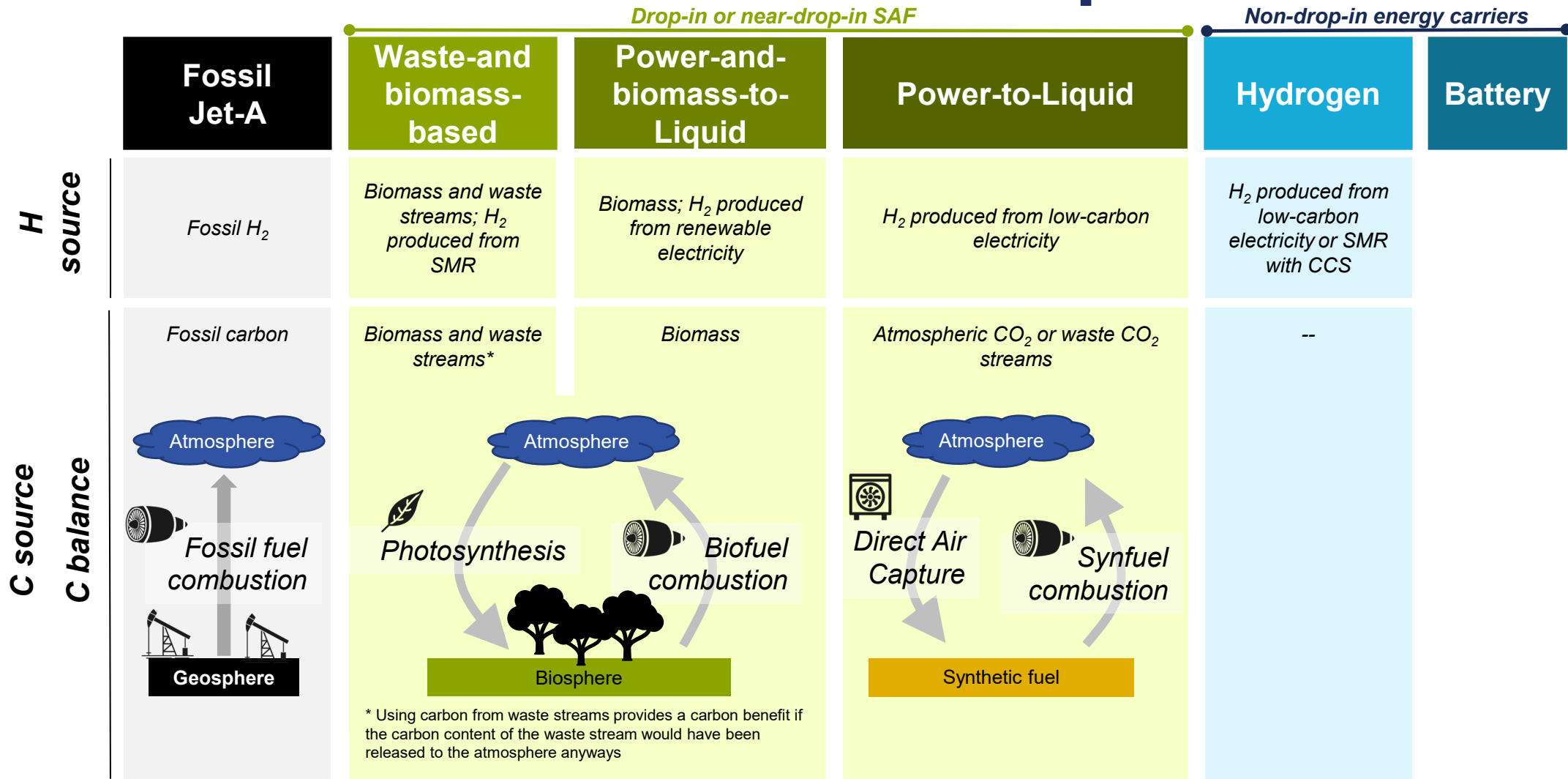
Our mission in AEE



To understand, manage, and reduce the environmental impacts of global aviation through research, technological innovation, policy, and outreach to benefit the public



Aviation's decarbonization paths



Hydrogen and Power-to-Liquid (PtL) Concepts for Sustainable Aviation Fuel Production – Ascent 80

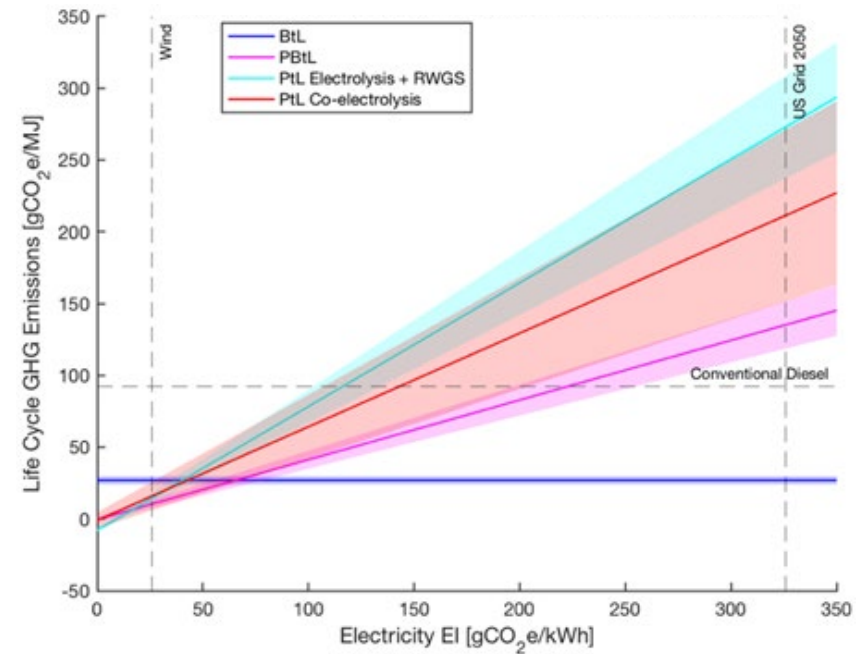


Challenges with non-drop-in options

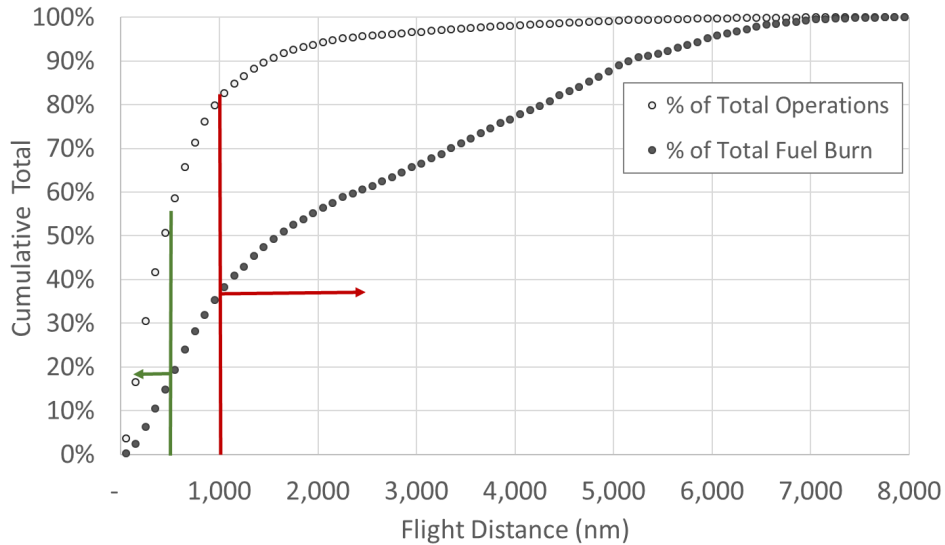
Electric energy consumption of fuel production in GW, by airport



Electrofuel Lifecycle GHG Emissions in gCO₂e/MJ vs. electricity EI

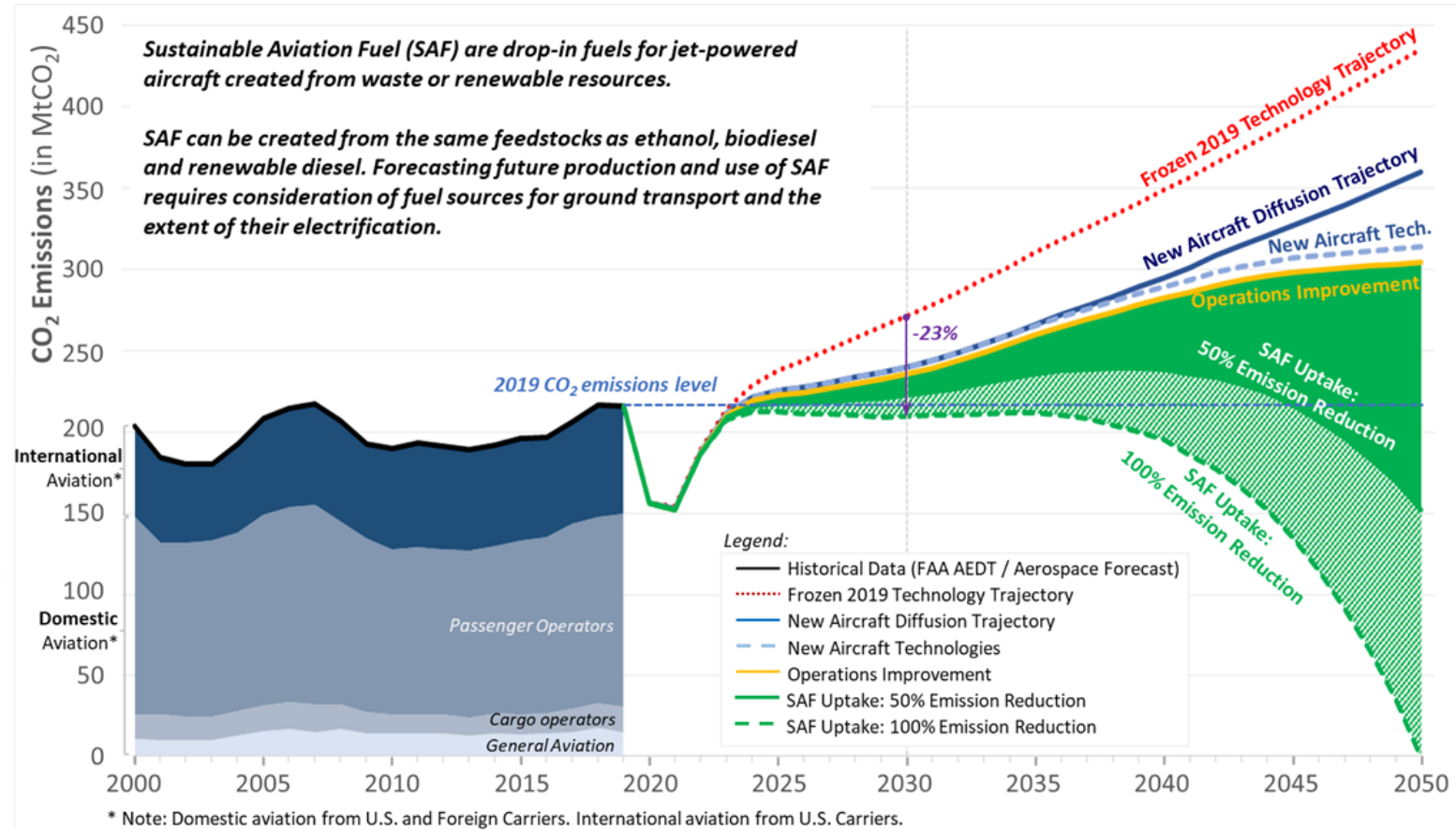


SAF is critical for near-term decarbonization



Flights less than 500 nm represent 50% of operations and 15% of total fuel use

Flights over 1,000 nm represent 20% of operations and 65% of total fuel burn



Federal efforts support SAF scale-up through close industry coordination

SAF Grand Challenge

IRA Tax Credits

IRA Grant Program



SAF Grand Challenge outlines plan to support near and long-term aviation goals

SAF Grand Challenge



[SAF Grand Challenge Roadmap: Flight Plan for Sustainable Aviation Fuel Report \(energy.gov\)](https://www.energy.gov/saf-grand-challenge-roadmap-flight-plan-for-sustainable-aviation-fuel-report)

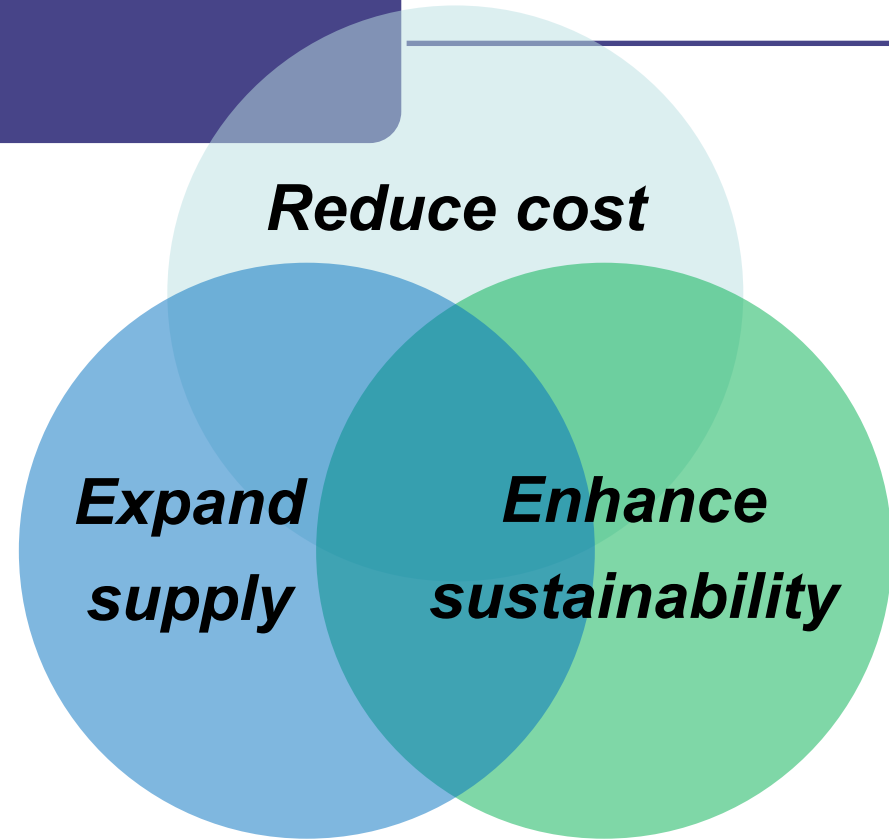


Federal Aviation Administration

SAF Grand Challenge focuses federal actions to support industry scale-up

SAF Grand Challenge

- 1) **leverage existing** government activities in research, development, demonstration, deployment, commercialization support, and policy
- 2) **accelerate new** research, development, demonstration, and deployment support
- 3) implement **supporting policy** framework



SAF Grand Challenge outlines key action areas for coordinated efforts

SAF Grand Challenge



Feedstock Innovation



Conversion Technology Innovation



Building Supply Chains



Policy and Valuation Analysis



Enabling End Use



Communicating Progress and Building Support

IRA provisions will provide domestic production tax credits through 2027

IRA Tax Credits

SAF BTC §13203 - 2023-2024

- Achieves 50% lifecycle GHG reduction
- \$1.25 with additional up to \$1.75 for additional lifecycle reduction

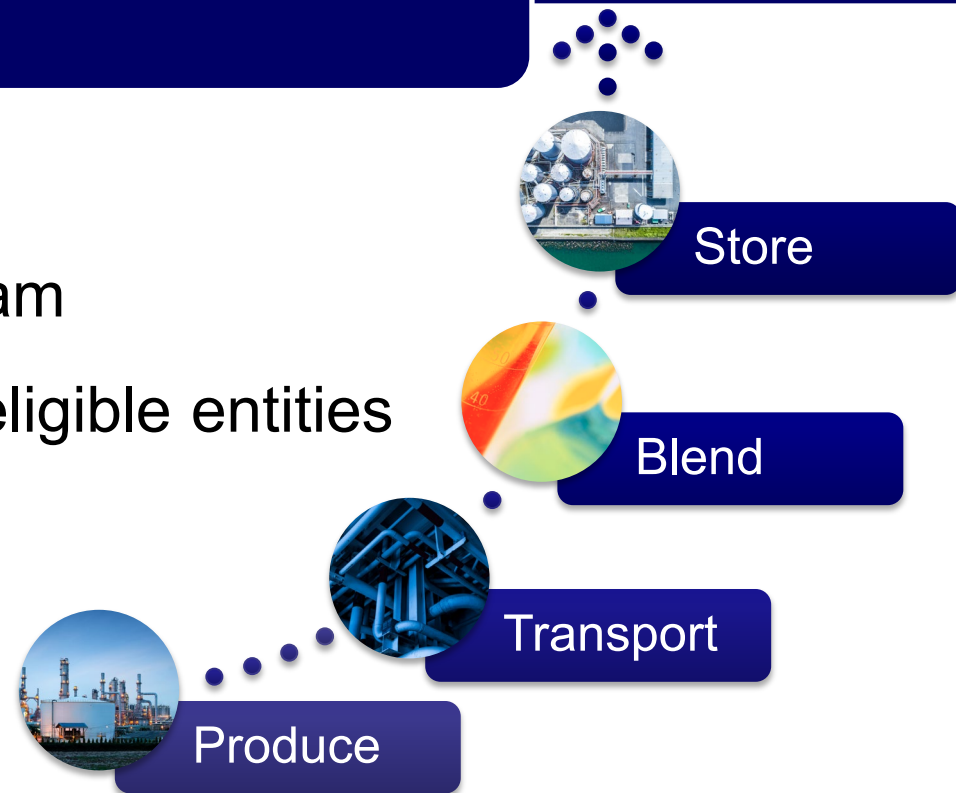
CFPC §13704 - 2025-2027

- Lifecycle GHG <50kg CO₂e/MMBTU (Jet Baseline = 94kg CO₂e/MMBTU)
- Enhanced value for SAF up to \$1.75 for 100% reduction

IRA grant program will support projects to rapidly scale-up domestic SAF production

IRA Grant Program

- §40007
- \$245 million competitive grant program
- Specifies consideration criteria and eligible entities
- Public Day – Dec. 14, 2022



QUESTIONS?

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