Fueling Aviation's Sustainable Transition (FAST) Grant Program
Frequently Asked Questions

Q: Does the "increase utilization of sustainable aviation fuel" element of the definition of "low-emission aviation technologies" allow for evaluation of new/novel candidate fuel pathways (e.g., non-hydrocarbon fuels) under FAST-Tech? Is FAST-SAF limited to only the IRA definition of SAF and FAST-Tech open to other pathways?

A: The definition of sustainable aviation fuel (SAF) from the Inflation Reduction Act Section 40007 (and included in Section A.6 of the NOFO) applies to both the FAST-SAF and FAST-Tech elements of the program. If the project proposal involves SAF, it must conform to this definition.

The IRA defines "low-emission aviation technologies" as technologies that significantly: (A) improve aircraft fuel efficiency; (B) increase utilization of sustainable aviation fuel; or (C) reduce greenhouse gas emissions produced during operation of civil aircraft. Per this definition, FAST-Tech is open to low-emission aviation *technologies* that leverage or enable alternative energy sources in support of these program objectives. However, project proposals to advance or produce an alternative energy source itself would not be eligible for FAST-Tech (e.g., qualifying or producing a new type of fuel, developing an alternative energy source technology that is not specific to an aviation application). Per Section 5.2 of the NOFO, note that for a technology to meet part (B) of this definition, it should not otherwise fall under the production, transportation, blending, or storage definitions of FAST-SAF or existing FAA efforts to support fuel testing and ASTM standard development of 100% SAF.

Q: For a fuel production project proposal, does the fuel need to meet the IRA definition of SAF? Or can it be a lower-carbon fuel which meets spec, is not statutorily defined as SAF?

A: The fuel must meet the IRA Section 40007 definition of SAF, also included in Section A.6 of the NOFO.

Q: The NOFO definition of SAF allows emissions reductions to be calculated under ICAO methodology (or a similar methodology), or a methodology determined by the Secretary to meet specific criteria. What are these other methodologies? Is this similar to the IRA tax credit definition we're waiting on from the Treasury?

How should proposals document SAF lifecycle values? Is the methodology similar to the IRA SAF Blender's Tax Credit guidance that Treasury is yet to release?

A: Section 40007 of the Inflation Reduction Act allows emissions reductions to be calculated under a lifecycle methodology similar to that adopted by ICAO or a methodology that the Secretary of Transportation determines is reflective of the latest scientific understanding and as stringent as the ICAO methodology. Section E.1.1 of the NOFO Technical Criterion 3 clarifies that, for SAF production projects, the greenhouse gas lifecycle analysis of the SAF to be produced is to be quantitatively documented to include emissions from feedstock and fuel production and potential direct and indirect greenhouse gas emissions. In the case of a project

supporting multiple SAF pathways, documented, quantitative greenhouse gas lifecycle analysis for each individual pathway is to be provided. For the purposes of application preparation, applicants are not required to use a specific methodology. The Council on Environmental Quality (CEQ) provides a non-exhaustive compilation of greenhouse gas (GHG) estimating tools and related resources available on government and university or college websites solely for information and convenience. This resource list is available here: https://ceq.doe.gov/guidance/ghg-tools-and-resources.html. Further information on ICAO methodologies is available here: https://www.icao.int/environmental-protection/pages/SAF_LifeCycle.aspx. The FAST grant program is separate from other sections of the Inflation Reduction Act, including Section 13203, and decisions made for the SAF Blender's Tax Credit do not make a determination for the FAST program.

Q: For Tier 2 non-production SAF projects (Categories 2, 3 and 4 – Transportation, Blending and Storage), how are applicants to respond to Technical Criterion 2, "the projected greenhouse gas emissions from the proposed project, including emissions resulting from the development of the project, and the project potential to reduce or displace, on a lifecycle basis, US greenhouse gas emissions associated with air travel."

A: Applicants are to provide documented, quantitative analysis of the projected greenhouse gas emissions directly resulting from the proposed project, including development. Additionally, for projects that enable the transportation, blending and storage of SAF, the lifecycle greenhouse gas emissions benefits from transporting, blending and storing the projected volumes of SAF may be quantitatively documented as an indirect project benefit.

Q: What is the maximum award size? What is the anticipated average award size?

A: Section B.2 of the NOFO provides rough guidelines for award sizes. However, these award values are presented as examples and should not be considered firm limits as to what award size will be considered. The number and size of awards will depend upon the quality of the individual proposals received and recommended for award, based on the evaluation process and criteria defined in Section E, as well as the funding limits of the program.

Q: NOFO Section A.5.2 states that "fundamental research (i.e., TRL 1-2)" is out of scope for Category 1 FAST-Tech projects. Is this the starting TRL or ending TRL of the research?

A: An applicant's proposed work scope for a FAST-Tech Category 1 project should ensure that the technology is TRL 3 or higher at the completion of the project. An applicant's proposed work scope can start at TRL 1 or 2 if the work scope within the project advances the TRL to 3 or higher. Please see https://www.nasa.gov/general/technology-readiness-level/ for TRL definitions. Note that NOFO Section E.1.2, Technical Criteria for FAST-Tech, Criteria 1, asks that applicants identify the current and projected TRL and manufacturing readiness level (MRL) of a proposed technology. This information is part of the assessment of the capacity for the eligible entity to increase the use of low-emission aviation technologies among the United States commercial aviation and aerospace industry. A lower TRL or MRL technology has a larger technical maturity gap to close before application/end use.

Q: NOFO Section A.5.2 refers to Category 1 FAST-Tech projects as having "relatively near-term impact on emissions from future engine and aircraft designs." What does this mean? Is there a target year for entry into service of technologies developed under FAST-Tech?

A: In this NOFO section, the term "near-term" is used in a relative sense to convey that a Category 1 project developing an individual technology has a more direct pathway to application and realized benefits than a Category 2 project enhancing testing capability. In the case of a Category 2 project, that enhanced test capability must then be utilized in the development of low-emission technologies before those benefits are realized in civil aircraft operations. The NOFO uses the phrase "longer term impact" in its description of Category 2 projects simply to make that comparison between the impact of the two project categories.

There is no entry into service date target for technologies developed under FAST-Tech. Note, however, that NOFO Section E.1.2, Technical Criteria for FAST-Tech, Criteria 1, asks that applicants identify the portion of operations through 2050 that could benefit from the application of the technology or enhancement of test/demonstration capability. This is to ensure relevance to the U.S. Climate Action Plan 2050 goal of net-zero greenhouse gas emissions from the aviation sector.

Q: Can applicants applying for FAST grants also have received other Federal grants for their work?

A: An applicant for the FAST Program is allowed to have also received another Federal award, for example for another portion of a larger initiative, but the work scope within their application for FAST must be distinct from their work scope for that other award. It could be complementary but should not overlap in terms of what work scope they are performing for the funding received under the FAST Grant Program and other Federal grant awards.

The intent of NOFO Section D.2.1 is for the grant applicant to identify any other Federal awards they have received that are relevant to efforts related to this work (but that should not overlap in work scope). In addition, note that an applicant cannot apply funds from another Federal award as cost share for a FAST grant, per 2 CFR 200.306 (b)(5).

Q: What is the anticipated selection date and start date for grant awards?

A: Per Section C.3 of the NOFO, projects should be ready to begin by August 1, 2024, and be able to be completed within a five-year maximum period of performance. Project selection is anticipated to occur in advance of that date.

Being ready to begin by August 1, 2024 means that the applicant's proposed work scope would be ready to start on that date, should award take place prior to that date.

Q: How can I be informed of future FAST Grant Program updates?

A: Please subscribe to the FAST mailing list here.