Department for Transport

Net zero transatlantic flight fund

Q&As

A list of the questions collated as of 26 May 2022, including through the briefing event run on 20 May 2022, is provided below. Questions and answers have been grouped together.

1. Eligibility

Q1.1: Must the applicant be an airline? Or can a producer apply, providing they have an airline as part of the project team?

Q1.2: Can airlines be the only winners of the competition and operators of the flight?

The expression of interest (EOI) stage and the full closed competition are open to airlines (i.e. we expect airlines will be the primary applicant). Due to the nature of this initiative, we expect that airlines will need to collaborate with multiple partners to deliver the flight. This means that the funding made available will likely cover activity conducted by multiple partners. It will be the applicant's decision to establish how funding, if won, will be shared among participants. We recommend any interested parties to approach airlines and discuss potential partnerships with them.

Q1.3: Can airlines partner together on a submission?

Q1.4: Is there just one winner?

Airlines will be able to partner each other, although funding will only be available to support the delivery of a single net zero transatlantic flight. It will be up to airlines to decide whose aircraft will be used.

Q1.5: Does the airline need to be a UK based airline or can international airlines with a UK-US route qualify?

Q1.6: Mustn't it be a UK airline or have a minimum UK content, or can this fund be given to foreign companies, unlike most InnovateUK competitions?

Any airline interested in delivering a transatlantic flight running on 100% SAF can apply, regardless of where they are registered. It will be up to airlines to demonstrate their ability to depart from the UK and land in the US and secure appropriate taking-off/landing slots. We expect the work conducted as part of this initiative will be beneficial to existing and future UK SAF activity, regardless of where the winning airline is registered.

Q1.7: Is the expectation that this will be a revenue passenger carrying flight?

The expectation is for the net zero flight to be delivered on a passenger aircraft, to inform the delivery of future net zero commercial flights and to test the provision of 100% SAF along the supply chain and its use in an operational environment similar to that of day-to-day commercial flights. We do not expect any revenue passengers will

be allowed on board unless appropriate permissions have been sought and obtained from relevant regulatory bodies.

Q1.8: When drafting the competition did you do a horizon scan of the number of potential flights and supply of SAF certified for use?

There are multiple UK and foreign airlines already operating daily flights between the UK and the US, some of which use SAF at lower blend levels. We expect the pool of potential applicants to be wide, and any airline interested in delivering a transatlantic flight running on 100% SAF from the UK will be able to apply, regardless of where they are registered. We are encouraging airlines to apply and get in touch with us, if interested.

Q1.9: If an airline applies, do partnerships with other stakeholders need to finalised at the EOI stage?

No, we are not expecting partnerships to be finalised by the EOI deadline - that will be formally assessed as part of the full closed competition. There will not be any penalties if these collaborations are not formalised by the EOI deadline, but we recommend airlines to provide an indication of who they are planning to work with and how they intend to work with others to deliver the flight. We also recommend them to describe any preliminary and/or planned engagement with other stakeholders that shows their ability to form partnerships later on.

2. Route

Q2.1: Must the flight originate in the UK or could it originate in the US and fly transatlantic to the UK?

Q2.2: Will you expect this flight to fly an ETOPs route or would a northerly non-ETOPs routing qualify? (ETOPs is the normal way you cross the Atlantic where you fly more than 60 minutes from a suitable airport, it is an additional approval from the CAA on top of an airline's basic approval)

Q2.3: Can the route be USA to UK or only UK to USA?

Q2.4: Is the intent to have a one-way transatlantic flight, or will funding be made available for a return flight?

Q2.5: Are we defining a transatlantic flight as being between the UK and US only i.e. not a Canadian destination?

Funding will be available to support a one-way transatlantic journey across the Atlantic, departing from a UK airport and landing in a US airport. It will be the airline's responsibility to secure appropriate taking off and landing slots and propose specific

airports of departure and arrival. The actual route on which the airline will fly between these countries on the day will need to comply with existing air traffic control regulations and procedures.

Subject to relevant approvals being obtained, we encourage the airline performing the flight to explore how air traffic control and route management or optimisation, alongside other measures, can reduce the climate impact of this and future transatlantic flights.

3. Fuel specifications and approvals

Q3.1: I assume that the flight will be with fully approved 100% SAF, which would require all components to be ASTM D7566 approved?

Q3.2: There is currently no fuel quality certification for 100% SAF, this would not currently be allowed in a Jointly Operated Facility (pipelines, airport depots, into-planes) due to contractual agreements. Do you expect certification from ASTM for 100% SAF? Is the competition viable without this?

Q3.3: To clarify, in order to apply, the fuel doesn't currently need to be ASTM-certified to blend 100%? Those approvals can be worked towards during the competition?

Q3.4: Is there enough time to get the approvals (e.g. CAA / FAA) within the project timeframe?

Q3.5: The return flight will have residual 100% SAF remaining in the tanks following the flight. Is there an expectation that the US regulators will be involved in this UK driven project to ensure no issues on the subsequent flights of the nominated aircraft?

Q3.6: FYI if you expect to have some comparisons on the return flight, the fuel will be Jet A, not Jet A-1, (so freeze point and other differences) and the route will be different.

100% SAF is currently not allowed by existing jet fuel specifications and only up-to-50% SAF blends can be used on commercial aircraft. For the 100% SAF flight to take place, it is therefore very likely that several permits will be needed. These may include ad-hoc engine or aircraft approvals, to be granted by relevant aviation authorities.

One of the main objectives of the initiative is to explore, and help tackle, the challenges preventing 100% SAF use, including regulatory barriers and fuel specification, especially when these differ (e.g. Jet A vs Jet A-1). We therefore expect collaboration

between airlines, aircraft and engine manufacturers and fuel producers to obtain these permissions in a timely manner without compromising safety.

The UK Government will remain available to facilitate collaboration between regulatory bodies, such as the CAA in the UK and the FAA in the US, to support this process before, during and after the flight takes place.

Q3.7: Could SAF produced from two different production pathways be blended to achieve 100% SAF?

We expect that SAF blended in this way to be eligible for the competition as long as safety allows it, and relevant permissions are obtained showing the compatibility of the blend with engines and aircraft.

Q3.8: Could a 50% SAF blend be combined with carbon removal technology in order to achieve an overall carbon neutral/negative flight? Or must it be 100% SAF?

While the use of 50% SAF combined with greenhouse gas removals could result in a net zero flight, that will not align with the objectives of the initiative, which is to explore and assess the impact of using 100% SAF on engines and aircraft. To receive funding, the aircraft will therefore need to run on 100% SAF in both engines.

4. Fuel production pathways and feedstocks

Q4.1: Are there any limitations on the source of the SAF?

Q4.2: Does the SAF have to be produced in the UK?

Q4.3: Can the SAF be made from outside the UK?

Q4.4: Can we avoid the use of HEFA and aim to use non-HEFA fuel to help those other pathways develop in the SAF market?

We are not prescribing what feedstock SAF should be made from or where it should come from at this stage, although the SAF will need to comply, at a minimum, with the sustainability standards of the Renewable Transport Fuel Obligation.

We are also expecting the initiative to promote UK-wide collaboration: to promote innovation, we welcome UK-produced SAF or SAF obtained from non-HEFA production pathways, although we are aware of the challenges associated with scaling up in the short term SAF pathways which are not currently commercial. We therefore encourage airlines to apply regardless of where the fuel is produced and the feedstocks used at this stage (as long as the fuel meets the RTFO sustainability standards at a minimum).

The full set of fuel eligibility, assessment and scoring criteria will be published after the EOI closes.

Q4.5: Will the expected carbon intensity of the SAF be a factor in deciding the winner of the competition?

Q4.6: Will award criteria take account of the carbon emission savings from the flight itself i.e. take account of biomass SAF vs used cooking oil fat SAF vs net zero carbon SAF?

The full set of assessment and scoring criteria will be published after the EOI closes.

5. Eligible activity

Q5.1: In addition to 100% SAF powered flight, do you require full technoeconomic, LCA and emission measurements as a part of the project?

Both the EOI and closed competition stages will allow bidders to propose work packages that explore how GHG emissions savings can be maximised and measured. We expect some of these activities to be eligible for funding, although the full list of eligible costs and assessment criteria will be confirmed ahead of the launch of the closed competition.

Q5.2: Would you be prepared to fund/support incremental development such as trialling the 100% SAF flight initially in a domestic flight environment?

While trialling 100% SAF on short-haul flights is key to test fuel, engine and aircraft technology, a number of short-haul demonstration events have already taken place. Through this initiative, we are therefore focussing on a long-haul journey that will allow us to test 100% SAF use for a sustained period of time.

Q5.3: Is all the fuel for the flight to be 100%SAF or would you accept a flight with one of 2 or one of 4 engines run on 100% SAF and the remaining engines run on conventional fuel?

A number of demonstration events using 100% SAF in only one engine have already taken place. To our knowledge, no commercial flight has used 100% SAF in both engines to date - this is why the initiative has been launched i.e. to explore, and help tackle, the challenges preventing 100% SAF use, including regulatory barriers and fuel specifications.

Q5.4: Can the proposal include joint contribution from US and UK SAF test centres (e.g. research centres) and stakeholders?

Yes. We welcome bids proposing collaborations with multiple stakeholders, including US research centres, UK academia and existing or developing fuel testing centres. The full set of assessment and scoring criteria will be published after the EOI closes.

6. Application process, deadlines and paperwork

Q6.1: What is the format of the EOI?

Q6.2: What is the format of the EOI response?

Q6.3: Is there a certain format required for EOI?

Airlines will need to fill out the form available here, setting out their high-level proposal. The form includes nine questions, each with a specific word limit. The form will need to be returned to saf@dft.gov.uk by 12 June 2022. Airlines will need to be successful at this phase before they are invited to apply to the full stage competition. Only EOIs that align with the objectives of the initiative and present a credible plan to deliver a net zero transatlantic flight running on 100% SAF within the expected timescale will progress to the full competition stage, where funding decisions will be made.

Q6.4: To confirm, the flight needs to take place by end of September 2023?

We expect the flight to be delivered by the end of 2023.

7. Funding eligibility criteria

Q7.1: Is it 100% funding (SBRI) or does the initiative require match funding?

Q7.2: What proportion of additional costs for the flight vs a conventional flight is it envisaged that the funding would cover?

Q7.3: What is the cost of conventional fuel needed for a transatlantic flight under normal conditions, to put the total £1 million from this competition into context?

Q7.4: When will the eligible costs and intervention rates be published as this will be a crucial element to airlines and partners deciding whether to enter or not?

Q7.5: Will there be assistance for flight insurance / liability?

A full breakdown of eligible activities and costs will be published after the EOI stage, before the closed competition opens. This will allow us to take into consideration the steps and challenges involved with the initiative set out in the EOI returns, and use these to inform and refine the funding criteria of the competition.

It is envisaged that funding will only be available to support the personnel, research and testing elements of the initiative, and the cost of any SAF or greenhouse gas removals used by the winning airline will not be eligible for government funding.

There will be therefore a degree of match funding required to cover these costs, as well as any eligible costs exceeding £1m - that is the maximum government contribution that will be made available for this initiative under any circumstances.