



Department  
for Transport



**E4tech**

Strategy | Energy | Sustainability  
an ERM Group company

# Advanced Fuels Fund

## Launch event

4 August 2022

Public Presentation

# Introductions & Agenda

## Key persons:

**Elliot Spindler**, Head of Advanced Fuels Funding Programmes, **DfT**

**Douglas Phillips**, Senior Policy Advisor, Advanced Fuels, **DfT**

**Elisabeta Pop**, Project Manager, **Ricardo**

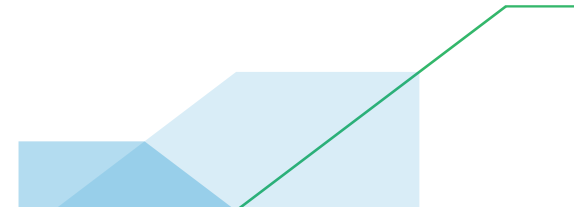
**Alexandra Humphris-Bach**, Project Director, **Ricardo**

**Richard Taylor**, Technical & GHG Lead, **E4tech**

**Ausilio Bauen**, Technical Director, **E4tech**

Time	Item	Lead
09.30	Welcome & housekeeping	Douglas Phillips (DfT)
09.35	AFF overview - Objectives, funding, scope	Douglas Phillips (DfT)
09.45	Minimum requirements: - Technical - Commercial - Eligible costs	Richard Taylor (E4tech) Elisabeta Pop (Ricardo)
10.10	Evaluation process: - Timelines - Application form and templates - Assessment criteria	Elisabeta Pop (Ricardo)
10.25	Key points	Elisabeta Pop (Ricardo)
10.30	Q&A	Elliot Spindler (DfT)

\*Please submit questions for the Q&A on the chat, these will be published by our moderator.



# Advanced Fuels Fund overview

# AFF background

## Existing Government support for the sector:

- £15m Green Fuels, Green Skies (GFGS) Competition, £22m Future Fuels for Flight & Freight Competition (F4C), £25m Advanced Biofuels Demonstration Competition (ABDC)
- Development fuels sub-target of the Renewable Transport Fuels Obligation (RTFO), new SAF mandate to start in 2025

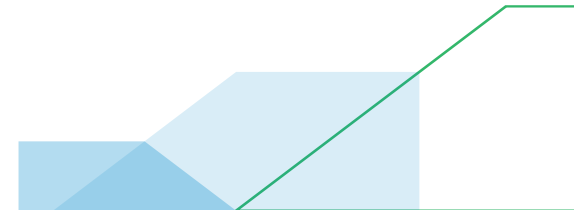
## Net Zero Strategy – October 2021

- *Become a leader in zero-emission flight, kick-starting commercialisation of UK sustainable aviation fuels (SAF) ... to enable the delivery of 10% SAF by 2030*

## Industry Survey – early 2022

## Jet Zero Strategy – July 2022

- Commitment to having at least 5 commercial scale SAF plants under construction in the UK by 2025
- Mandate for at least 10% SAF blended by 2030



# Objectives and funding available

## Key objectives of the Advanced Fuels Fund are to:

- *Kickstart the UK advanced fuels sector with the commercial deployment of innovative fuel production technologies that are capable of significantly reducing near-term UK aviation emissions.*
- *Broaden and strengthen the UK project pipeline, getting as many UK projects as possible to an "investment ready" state.*
- *Support the advancement of a diverse range of technology routes to SAF and other advanced fuels.*

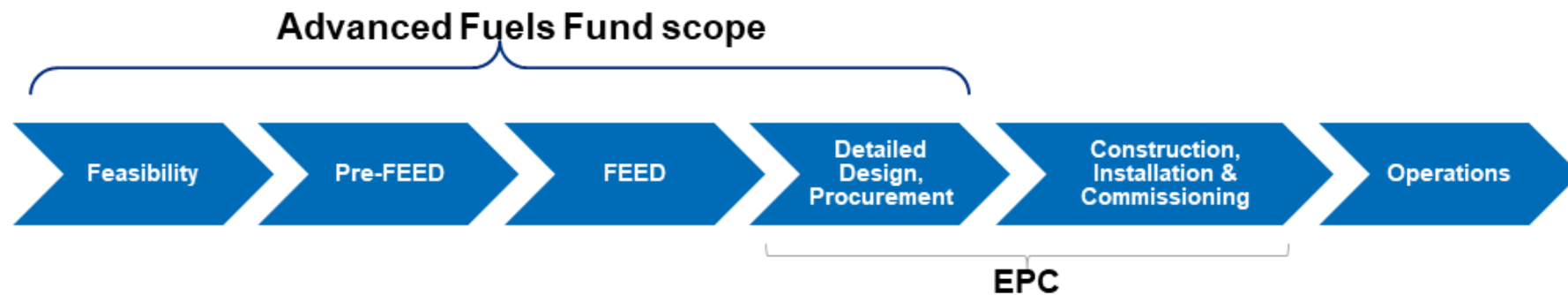
**DfT will competitively allocate up to £165 million in grant funding to support UK advanced fuel projects until 31 March 2025. A sub-pot of £22 million is available to prioritise projects that use CO<sub>2</sub> (point source or direct air capture) as their main carbon source in fuel production.**

	Total AFF funding available	of which, CO <sub>2</sub> sub-pot
Year 1 (to 31 March 2023)	£47 million	£5 million
Year 2 (1 April 2023 to 31 March 2024)	£59 million	£7 million
Year 3 (1 April 2024 to 31 March 2025)	£59 million	£10 million



# Scope and application windows

Funding is available for first-of-a-kind commercial and demonstration-scale projects within the UK, at all development stages up to construction starting.



The first application window for the Advanced Fuels Fund runs until 14 September 2022, and a second application window is expected to open in summer 2023.

# Minimum requirements for application window 1

# Eligibility criteria – technical

Category	Eligibility Requirements
<b>Main fuel output</b>	<p>One of the main fuel outputs of the project must show the ability or future potential to be blended with jet A-1:</p> <ul style="list-style-type: none"><li>- Ideally would already <b>meet ASTM fuel specifications</b></li><li>- Or currently engaged with the <b>ASTM certification process</b></li><li>- Or clear evidence of the fuel's <b>future potential</b> to be meet ASTM</li></ul> <p>Alternatively:</p> <ul style="list-style-type: none"><li>- Commercial scale projects with <b>drop-in diesel or avgas</b> as their main output are allowed, if the project can be <b>retrofitted to produce jet</b>.</li><li>- Demonstration projects with drop-in diesel or avgas as their main output are allowed, if the <b>technology can be modified to produce jet</b> in the future</li></ul>
<b>TRL</b>	<ul style="list-style-type: none"><li>- The proposed plant must achieve Technology Readiness Level <b>6-8</b> (small demo, large demo or First-Of-A-Kind commercial) when operational.</li><li>- The proposed technology must already be at least <b>TRL 5</b> (pilot plant) today.</li></ul>





# Eligibility criteria – sustainability

Category	Eligibility Requirements
<b>Feedstock</b>	<p>All fuel consignments must come from eligible feedstocks:</p> <ul style="list-style-type: none"> <li>- Biomass feedstocks (original feedstocks used for any intermediates) have potential to qualify as <b>RTFO development fuel</b>. Segregated fats/oils are not eligible</li> <li>- Recycled carbon fuels (RCF) from fossil fraction of <b>refuse derived fuel</b> and <b>industrial waste gas feedstocks</b> are permitted</li> <li>- Waste feedstocks must meet <b>waste definition</b> and comply with the <b>waste hierarchy</b>. Renewable fuels of non-biological origin (RFNBO) must follow RTFO <b>CO<sub>2</sub> sourcing guidance</b></li> <li>- Hydrogen production onsite or larger purchases must meet <b>Low Carbon Hydrogen Standard</b></li> <li>- <b>Fossil hydrogen usage capped at 5%</b> of fuel output</li> <li>- <b>Nuclear energy is permitted</b>, if RFNBO CO<sub>2</sub> sourcing guidance followed and any intermediate H<sub>2</sub> meets rules above</li> </ul>
<b>GHG emissions</b>	<ul style="list-style-type: none"> <li>- FOAK commercial plants must have fuel lifecycle GHG emissions <b>below 31gCO<sub>2</sub>e/MJ</b> (LHV) in first full year of operation</li> <li>- Demonstration plants do not have to meet this, but must show how a future commercial plant will meet this threshold</li> <li>- <b>RCFs have a separate threshold that tightens over time</b>, as their GHG methodology includes counterfactual emissions</li> <li>- Nuclear e-fuels GHG methodology should follow RFNBO methodology</li> <li>- Carbon capture and utilisation credits only permitted if evidence of permanence provided</li> </ul>



# Eligibility criteria – commercial

Category	Eligibility Requirements
<b>Location</b>	The proposed plant must be located in the UK.
<b>Lead</b>	The project lead must be a UK registered company or charity.
<b>T&amp;Cs</b>	Acceptance of the grant offer letter terms and conditions in full at the application stage. Further negotiation is not possible.
<b>Project lifecycle stage</b>	<ul style="list-style-type: none"> <li>- Activities proposed within Feasibility, Pre-FEED, FEED, Detailed Design and Procurement of Main Equipment stages are eligible.</li> <li>- Ineligible activities include Construction, Installation, Commissioning, Start-up and Operations.</li> <li>- The project must not have already commenced Construction.</li> </ul>
<b>Eligible costs</b>	<ul style="list-style-type: none"> <li>- Funding cannot be used for previously funded activities or to replace private sector investment.</li> <li>- Funding is in arrears for project expenditure.</li> <li>- Further details are given on the following slides regarding eligible cost categories and maximum grant funding intensities.</li> </ul>
<b>Timescale</b>	<ul style="list-style-type: none"> <li>- Funding is only available for project work completed during the competition's Funding Period (by 31st March 2025).</li> <li>- Funding awards must be dispersed within each of the 3 Funding Years (to 31 March) as awards cannot be rolled over between Funding Years.</li> </ul>



# Eligible costs

Up to 100% grant funding for Feasibility, Pre-FEED and FEED stages

Up to 50% grant funding for Detailed Design and Procurement of Main Equipment stages

No funds for construction, installation, commissioning, start-up or operational stages

**Projects that can evidence greater levels of match funding will be preferentially scored.**



# Eligible activities and costs

- ✓ Technical reviews, in-depth research and feasibility studies
- ✓ Strategy work and option appraisals
- ✓ Plant site identification and review
- ✓ Permitting and planning application work
- ✓ Feedstock availability assessments
- ✓ Economic assessments (including detailed revenue and cost modelling)
- ✓ Process Flow Diagram (PFD) and Process and Instrumentation Diagrams (P&IDs) development up to Approved for Construction revision
- ✓ Hazard and Operability (HAZOP) and Hazard Identification (HAZID) Workshop
- ✓ Process and Mechanical specifications and data sheets
- ✓ Safety, Mechanical, Civil, Structural, Architecture, Electrical, Instrument's lists, drawings and studies
- ✓ Plant layout design and plant modelling work
- ✓ Material Take Off (MTO)
- ✓ Developing detailed GHG emissions projections for plants
- ✓ Developing detailed project execution plans, risk assessments, and detailed budgets
- ✓ Tendering, bidding, visiting vendor and subcontractor's site
- ✓ Procurement of main equipment for the project, e.g. conversion and fuel upgrading technology, any onsite feedstock pre-processing equipment, CO2 capture equipment
- ✓ Own labour costs, including agreed overheads and project management cost, but not profit. These costs should be directly linked to the design, and evaluation of the equipment contained in the project and auditable as such
- ✓ Hosting meetings with potential consortia members
- ✓ Formalising a consortium or partnership arrangement
- ✓ Hosting meetings between applicant consortia and others necessary to further the development of the project
- ✓ Securing private sector funding
- ✓ Addressing legal issues



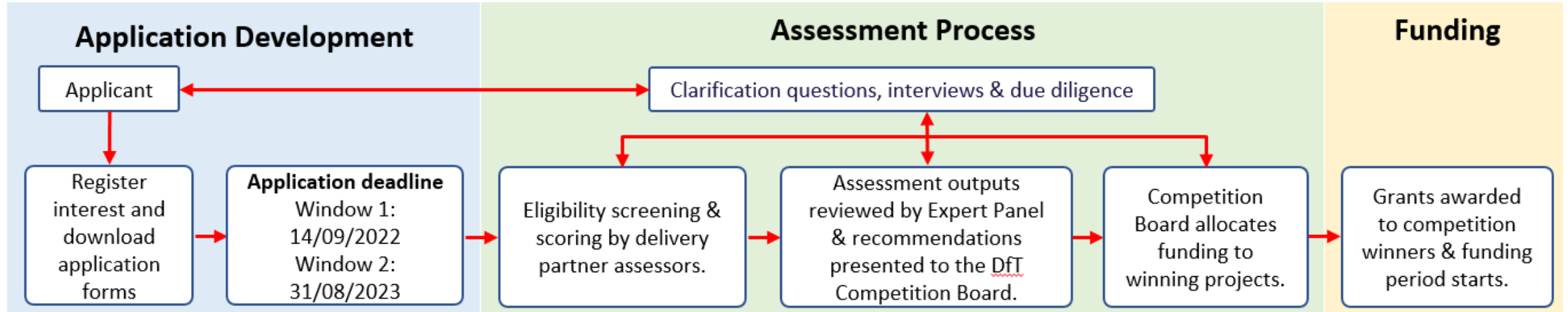
# Ineligible activities and costs

- × Any costs incurred before a grant offer letter has been signed with DfT
- × Any cost incurred for construction or installation of the plant, including own or subcontractor labour, overhead and operating costs
- × Any cost incurred in commissioning, start up, operations and maintenance
- × Any bulk material costs including pipework
- × Any building works
- × Purchase or lease cost of any land on which the project is built
- × Input VAT (except where it cannot be reclaimed by grantees)
- × Interest charges, bad debts
- × Hire purchase interest and any associated service charges
- × Loan repayments
- × Mark up and profits
- × Profit earned by a subsidiary or by an associate undertaking work sub-contracted under the project
- × Notional costs (e.g. opportunity costs)
- × Audit fee for certification of claims by an independent accountant
- × Grants that contribute directly to a company's distributed profits
- × Endowments
- × Funds to build up a reserve or surplus
- × Retrospective funding
- × Any costs that are already being funded by another grant source, or are to be funded by another grant source in the future
- × Advertising, marketing, sales activities, entertaining



# Evaluation process

# Timelines



Date	Stage
19 July 2022	Fund launched, Window 1 open for applications.
16:00 BST 14 September 2022	Window 1 Application deadline.
November 2022	Announcement of winners and the start of Funding Period for Window 1 projects.
12 June 2023	Window 2 open for applications (provided funds left after Window 1).
31 August 2023	Window 2 Application deadline.
November 2023	Announcement of winners and the start of Funding Period for Window 2 projects.
31 March 2025	End of Funding Period for all winning projects.

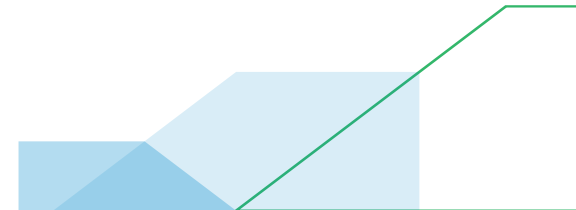
# Application development

**Guidance document:** please use updated v1.1

## Documents to complete:

- Application form + Appendices:
  - Consortium letters
  - Technology evidence
  - Work plan
  - Project budget (template provided)
  - Projected cash-flow model (template provided)
  - Match funding details
  - Outline risk assessment (template provided)
  - GHG emissions estimate (template provided – please use updated v1.1)
  - Development status documents
  - Documentation relevant for due diligence

**Please check the News and Updates section on the fund website for updated documents and anonymised Q&As.**





# Scoring process for eligible projects

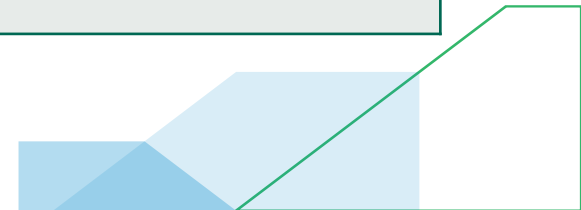
We have a rigorous process to manage any direct or perceived conflict of interest that may arise from a personal/working relation between an applicant and one of the delivery partners.

Total score calculated using criteria weightings must be >50%.

Projects may be invited to interview, and/or asked to provide clarifications within 5 working days. Due diligence by DfT will also be started during this period. Projects must pass to receive funding.

DfT Fund Board will employ a portfolio approach considering scores and breadth of technologies.

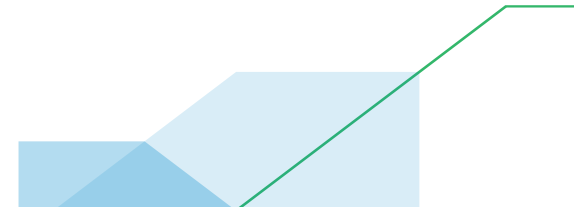
Category	Scoring criteria
<b>Project relevance (5%)</b>	1. Clarity of the project objectives and relevance to the fund objectives
<b>Technical approach (30%)</b>	2. Credibility of the technological approach, clarity of the project data and justification with relevant pilot/demo plant data
	3. Level of innovation and progress as a result of the proposed plant
	4. Level of progression of the fuel pathway through ASTM certification process
	5. Level & evidence of fuel GHG emissions from the proposed plant (and expected fuel GHG emissions at commercial scale if different)



# Scoring process for eligible projects

Category	Scoring criteria
<b>Commercial approach (20%)</b>	6. Level of progression towards construction of a FOAK commercial plant as a result of the funded activities*
	7. Potential & case for economic benefits of the proposed plant during construction & operation, incl. costs, revenues & jobs created
	8. Potential and case for benefits of future deployment of the technology within the UK, and benefits from export markets
<b>Project Implementation (45%)</b>	9. Credibility of current status of the project and readiness to proceed with funded activities
	10. Confidence in skills and experience of the project team
	11. Appropriateness of project management and governance structure and partners roles
	12. Appropriateness and credibility of the project work plan
	13. Detailed understanding of the project risks and their management
	14. Credibility of detailed project costing for the funded activities
	15. Strength of case for DfT funding, including level of match funding leveraged* and status of securing funding

\*Multipliers (between 50%-100%) are applied to the scores for these two criteria to prioritise projects to commercial scale construction and with more match funding



# Key details

## **Window 1 deadline for applications: 16:00 hours BST, 14 September 2022**

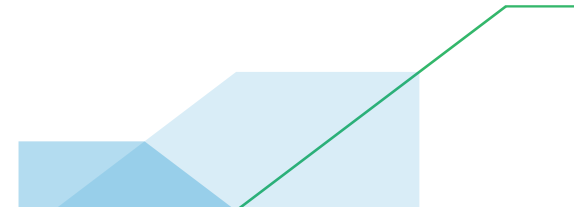
- Subsidy Control rules apply – more info at [Overview of the subsidy control regime – a flexible, principles-based approach for the UK](#)
- Applications must meet all the eligibility criteria, and all claimed project costs must be eligible.

## **One electronic copy must be sent to [AFF@ricardo.com](mailto:AFF@ricardo.com) prior to deadline**

- Applications will be acknowledged by email and a URN will be issued within two working days. Your URN should be used in all communications.

## **Further details available at <https://ee.ricardo.com/aff>**

- All queries should be directed to [AFF@ricardo.com](mailto:AFF@ricardo.com)
- Anonymised FAQs will be published and regularly updated.



# Q&A

# Thank you for attending



Feel free to contact us  
[AFF@ricardo.com](mailto:AFF@ricardo.com)

