

Defence and Security Accelerator (DASA) and
Department for Energy Security and Net Zero (DESNZ)

Windfarm Mitigation for UK Air Defence - Phase 3 Stream 1

Demonstration of novel methods to overcome
the impact of wind turbines on air surveillance
systems

GRANT COMPETITION GUIDANCE NOTES
February 2023 (Updated March 16 2023)

Any references to the **Department for Business, Energy and Industrial Strategy (BEIS)** in this Competition Document or any other documents associated with this competition shall, where appropriate, be treated as references to the **Department for Energy Security and Net Zero (DESNZ)** which was created through the Machinery of Government changes on 07/02/2023.

Please note Clarifications resulting from questions raised at the recent Stakeholder and 1 to 1 Events have been added as Appendix 4 on 15 March 2023.

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Glossary of terms and definitions

AD	Air Defence
BEIS	Department for Business Energy and Industrial Strategy
BESS	British Energy Security Strategy
Capex	Capital Expenditure
CCC	Climate Change Committee
CIP	Cyber Implementation Plan
CO2	Carbon Dioxide
DASA	Defence and Security Accelerator
DCPP	Defence Cyber Protection Partnership
Dstl	Defence Science and Technology Laboratory
FAQs	Frequently Asked Questions
FEC	Full Economic Costs
GDPR	General Data Protection Regulation
GFA	Grant Funding Agreement
GHG	Greenhouse Gas
GW	Gigawatt
IEA	International Energy Agency
IPR	Intellectual Property Rights
KPI	Key Performance Indicator
M or m	Million
MOD	The Ministry of Defence
MOD	Ministry of Defence
MODREC	Ministry of Defence Research Ethics Committee
MoU	Memorandum of Understanding
MW	Megawatt
NZIP	Net Zero Innovation Portfolio
OEM	Original Equipment Manufacturer
OW	Offshore Wind
PSR	Primary Surveillance Radars
RAF	Royal Air Force
RAR	Risk Assessment Reference
RCS	Radar Cross-Section
RD&D	Research, Development and Demonstration
RTO	Research and Technology Organisations
SAQ	Supplier Assurance Questionnaire
SME	Small and Medium-sized Enterprise
SSQ	Standard Selection Questionnaire
TRL	Technology Readiness Level
VAT	Value-Added Tax

Supporting Documents

The following documents support this Competition Guidance and are available on the competition website.

- [Annex 1A](#): Grant Funding Agreement (GFA) (Terms & Conditions)
- [Annex 2A](#): Declarations
 - Declaration 1: Statement of non-collusion
 - Declaration 2: Form of bid
 - Declaration 3: Conflict of Interest
 - Declaration 4: Standard Selection Questionnaire (SSQ) Parts 1, 2 & 3
- [Annex 2B](#): Declaration 5: The UK General Data Protection Regulation Assurance Questionnaire for Contractors
- [Annex 3A](#): Project Cost Breakdown Form
- [Annex 4A](#): Offline DASA Submission Walkthrough (See Section 5.2)
- [Annex 5A](#): Partner Information Form

1. Introduction

The purpose of this document is to provide an overview of the Windfarm Mitigation for UK Air Defence (AD) Phase 3 competition.

The competition is organised by the [Defence and Security Accelerator](#) (DASA), but is funded by the [Department for Business, Energy, and Industrial Strategy](#) (BEIS) [Net Zero Innovation Portfolio](#) (NZIP); and is undertaken in partnership with the [Royal Air Force](#) (RAF) and the [Defence Science and Technology Laboratory](#) (Dstl).

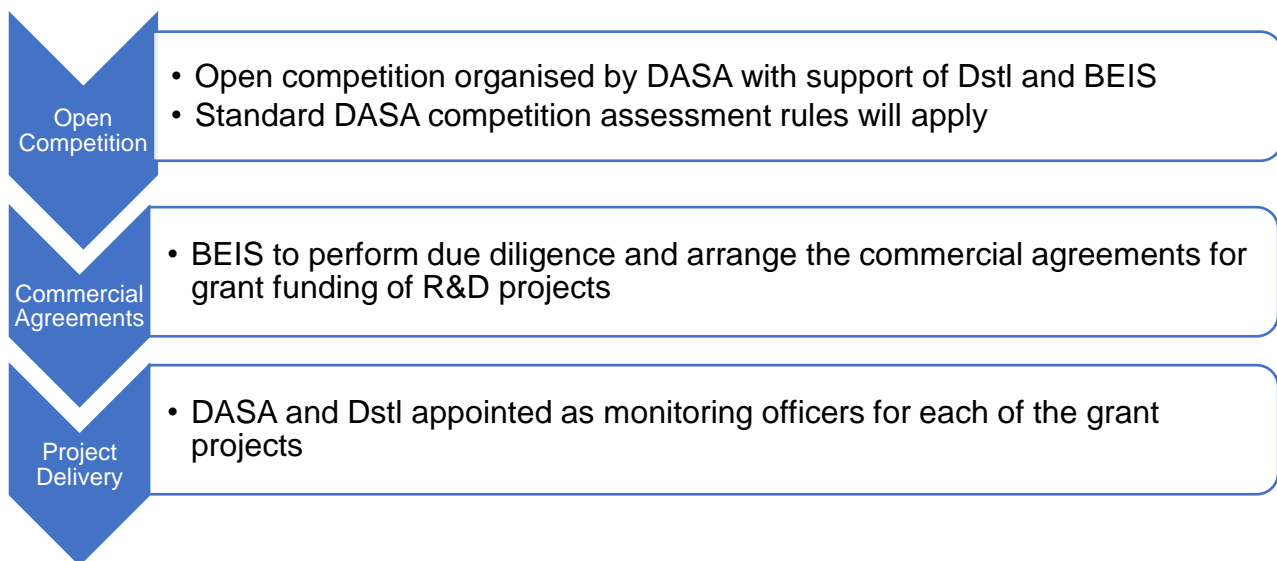
This is an open competition and participation in previous phases is not a requirement to submit into Phase 3. This Phase 3 competition builds on [Phase 1](#) and [Phase 2](#) and continues the development of innovative technologies to enable the long-term co-existence of offshore windfarms and Air Defence radar. The technologies we are interested in can be broadly categorised into the following three areas:

- use of signal processing or an alternative/supplementary radar to mitigate the impact of the windfarm,
- use of stealthy materials to reduce the radar signal returned from wind turbines,
- use of alternative surveillance methods to monitor the airspace.

IMPORTANT

Funding to successful projects will be awarded by BEIS using BEIS' Grant Funding Agreement (GFA) T&C's which require match funding from the applicants. It should be noted at the outset that Phase 3 is split into 2 streams (Section 2.3). This Competition Guidance is focused on Stream 1. The new delivery model is as follows:

Figure 1 - Stream 1 Delivery Model



2. Programme Overview

2.1. Context

Offshore Wind (OW) will play an increasingly critical role in the UK's renewable energy supply to enable the Net Zero ambitions. This is manifested by a 50 GW by 2030 target in the [British Energy Security Strategy](#) (BESS) and predictions by the [Climate Change Committee](#) (CCC) of between 65-140GW of OW capacity by 2050, depending on which pathway is adopted.

The offshore windfarm installations may adversely impact the quality of data obtained from the long-range Primary Surveillance Radars (PSR) which are the backbone of the UK's AD detection capability. A technological solution, or combination of solutions, is needed to enable the long-term co-existence of windfarms and AD and enable the deployment of offshore wind.

Through the Joint Air Defence and Offshore Wind Task Force, the MOD is currently working on procuring mitigation solutions in the near term that will enable the next generation of large-scale offshore windfarms to be built that will become operational from 2025 and beyond. **This innovation programme is complementing the MOD work and focuses on helping to find solutions that will enable the long-term co-existence of AD and offshore wind.**

2.2. Background

[Phase 1](#) and [Phase 2](#) advanced a range of technologies and moved them up the Technology Readiness Levels (TRL) and provided evidence for the scope of this Phase 3 competition.

2.3. Programme Aim & Structure

The overall aims of the programme are as follows:

- to accelerate the development of windfarm mitigation technologies across three technology categories of radar, stealthy materials and alternative tracking and
- disseminate the findings to support the decision making on further development of the most promising technologies and potential deployment at scale.

The programme aims will be delivered via two different Streams:

2.3.1. Stream 1: Demonstration – BEIS grant T&Cs (up to £14.15m available) [THIS COMPETITION]

A grant funding competition for demonstration projects, with funding allocated as per Section 6.1. Applicants will need to provide match funding. These projects will demonstrate innovative technologies with the potential to mitigate the effect of windfarms on the AD radar. Number of

grants will depend on funding available and quality of bids. See Section 3 for scope. Stream 1 projects will be required to cooperate with the winner of Stream 2 competition, which will include provision of ad hoc technical and troubleshooting support to enable the development of an Analytical Evaluation Study comparing trade-offs between the different mitigation technologies. As part of their budgeting, Stream 1 projects are asked to make provisions for up to 25 person-days for the anticipated support to be provided to the Stream 2 winner (support required will be reviewed once Stream 2 contract is in place). Cooperating with Stream 2 winner is an eligibility criterion for Stream 1 projects. See section 2.3.2 below for more information on Stream 2.

2.3.2. Stream 2: Analytical Evaluation Study – DASA Contract T&Cs (up to £0.5m available) [FUTURE COMPETITION]

NOTE: The information about Stream 2 provided in this guidance is not final and is subject to change. It is provided to allow Stream 1 applicants to make an informed decision on the participation in this competition and plan accordingly. For avoidance of doubt, Stream 2 study will not be used for assessment or performance monitoring purposes of Stream 1 projects. Its purpose is to build an evidence base to inform future policy decisions.

A contract competition for an analytical evaluation study to objectively compare the performance trade-offs between the different mitigating technologies in Stream 1 (radar, materials, alternative tracking).

It is anticipated that the Stream 2 competition will launch once the winners of Stream 1 are known (~July 2023) and that there will be 1 contract available, which is anticipated to start in Q4 2023. Scope of work and value will be fully defined in the future competition guidance – Sections 2.3.2.1 and 2.3.2.2 below outline the preliminary scope. The Stream 2 competition winner will be required to work with the Stream 1 grant recipients in order to meet the objectives of the study.

2.3.2.1. Stream 2 Preliminary Objectives

To allow the comparison of disparate mitigation techniques, including those that are based on:

- Improved radar tracking approaches, whether by the use of better discrimination algorithms to allow the windfarm clutter to be rejected or additional radars to improve tracking performance over the windfarm.
- Materials approaches, where the materials used to construct the turbine are altered to reduce the clutter observed by the radar.
- Alternative tracking approaches, where non-radar sensors are used to supplement the existing radar network over the windfarm.

To measure the effectiveness of these approaches over a representative set of scenarios that are designed to challenge proposed mitigation approaches.

2.3.2.2. Stream 2 Preliminary Scope

This activity is designed to assess the effectiveness of different windfarm mitigation approaches by modelling. Although evidence of validation will be required, the intent is not to conduct flight trials at this stage.

To measure the effectiveness of the proposed mitigations, the supplier will work with Dstl to define a set of metrics that can be used to compare different techniques. These metrics should include: track maintenance effectiveness, latency and any increases to the false alarm rate.

Where possible, reuse of existing, validated, models is encouraged. However, it is accepted that some adaptations may be needed to meet all the requirements listed. For planning purposes, bidders should assume that the technologies and scenarios to be modelled are as listed below and design their proposal accordingly. The actual cases modelled will be agreed between Dstl and the supplier.

How this links to Stream 1:

- The Stream 2 supplier will be required to interact with all the suppliers in Stream 1 to define and model their proposals in a way that suitably respects the intellectual property of all parties.
- Suppliers who wish to bid into both streams will need to ensure that suitable arrangements and ethics walls are in place to prevent commercially sensitive information from this modelling exercise being passed to the Stream 1 competition.
- Stream 2 will be a fully funded competition; there is no expectation for matched funding. Therefore, this is being run as separate competition.

Technologies to be modelled:

- Radar approaches: enhanced signal processing to reduce the impact of windfarm clutter and / or additional radars to provide enhanced cover
- Materials approaches: model the impact of a proposed radar absorbing material, including the effects of directionality, bandwidth and absorption.
- Alternative tracking approaches: model the effects of supplementary sensors and how these might be incorporated into an integrated picture.

Examples of scenarios to be modelled (specific set to be notified once Stream 2 commences):

1. Airliner loses height over the windfarm (such as Sheringham Shoal)
2. Military jets cross over the windfarm
3. Fast jet performs a high g turn over the windfarm
4. A supersonic fast jet traversing the windfarm at high altitude
5. A conventional cruise missile traversing the windfarm at very low altitude
6. A moderately stealthy fast jet traversing the windfarm.
7. A helicopter traversing the windfarm at typical civilian operating altitude.
8. Repeat of scenarios 1-7, but with a more distant windfarm loosely such as Hornsea 3. That second windfarm should include the turbines with the largest diameter likely to be in use today and in 2030s, and with appropriate spacing between the turbines.

3. Competition Scope

Stream 1 of Phase 3 is looking to fund projects which will demonstrate innovative technologies with the potential to mitigate the effect of windfarms on the AD radar up to Technology Readiness Level (TRL) 6, which is a demonstration in a relevant environment. See Appendix 1 for TRL definitions.

It is anticipated that this may require collaboration between several suppliers (technology provider, OEM, onshore/offshore windfarm owner/operators, developers etc.) and consortia to be formed. Close collaboration with the wider windfarm industry is expected. The level of funding available in Phase 3 reflects these ambitions. As part of the Grant Funding Agreement, we expect a relevant demonstration of the mitigation technology showing how it can enable the co-existence of offshore windfarms and AD radar. A key element of the scope is to evidence how the technology will perform in the context of future offshore windfarms with larger turbines.

3.1. Impact of windfarms on radars

Presence of windfarms impacts AD radars. Windfarms have the potential to reduce the ability of a radar to track aircraft, due to two main effects:

Clutter: each wind turbine reflects radio waves, which is perceived by the radar as an increased level of clutter over the area of the windfarm. This clutter is hard for the radar to distinguish from the target of interest, such as an aircraft, leading to false tracks being generated. This clutter cannot be eliminated using the Doppler processing techniques that are applied to returns from stationary objects, because the blades of the turbines are moving at considerable speed, comparable to an aircraft. As more, and larger, turbines are added, the impact of this clutter will grow.

Desensitisation: radars have a limited dynamic range which means that, in the vicinity of a very large return, it is not possible to detect much smaller objects as their signal is swamped by the larger reflection. Also, some radars may automatically reduce sensitivity in the region of large returns to prevent the system being swamped by false tracks.

Both these issues need to be resolved to allow the UK to reconcile its environmental and defence commitments.

3.2. Potential Mitigations

There are several potential approaches to mitigating the impact of wind turbines on radars:

- **Radar approaches**, where signal processing or an alternative/supplementary radar is used to mitigate the impact of the windfarm.

- **Materials approaches**, where the turbine uses different materials to reduce the Radar Cross-Section (RCS) of the blades and hence the level of clutter.
- **Alternative tracking approaches**, where other technologies are used to provide supplementary tracking over the windfarm.

These approaches need not be used in isolation, it may be possible that a combination of methods would produce the best mitigation.

The mitigation would need to work for radars operating at S band (2-4 GHz), with peak performance at 3.1-3.4 GHz. An ability to provide benefits at other radar bands, such as L band (1-2GHz) would be desirable. The proposed solution should be applicable to all windfarms within radar line of sight of the current AD radar sites in the UK.

3.3. Impact of Future Offshore Windfarms

To meet the targets for offshore wind energy generation it will be necessary to build more and bigger windfarms. This will increase the affected areas both horizontally and in height. Minimising the gaps in surveillance coverage is required to maintain the ability to detect incoming threats. In addition, the possibility of cumulative interference caused by two separate windfarms in proximity, or in the same radar line of sight, has to be considered.

It is likely that floating structures will be used in the future meaning the horizontal vertical position (bob and sway) of turbines is not fixed.

Where a demonstration takes place onshore, or offshore, but on smaller sized devices, the projects must develop robust plans on how the performance of the technology can be translated onto the windfarms and wind turbines of the future. State of the art devices similar to the [IEA 15MW reference turbine](#) should be considered. 20MW+ devices, likely available in early 2030s, can be scaled by increasing the rotor diameters.

3.4. Stream 1 Challenges

The fundamental challenge is to find a technological solution, or a combination of solutions, to maintain the effective surveillance of airspace despite the presence of future offshore windfarms, which will enable the long-term co-existence of offshore windfarms and AD.

Whilst the context must take into account current practices and the wide use of radar the enduring requirement is one of effective monitoring of airspace. This should be achieved without compromising the performance of offshore wind turbines in terms of energy output or reliability which are critical in the UK reaching its decarbonisation targets.

The following topics are not restrictive nor exhaustive but present areas upon which innovation may have an impact. Scenarios are given here as illustrations and are not to be considered as direct problems to be solved.

3.4.1. Radar Approaches

In this challenge area we are looking for innovative radar signal processing and/or alternative radar techniques (such as multistatic systems) that can be used to maintain air surveillance over the area of interest.

The work done in Phases 1 and 2 has addressed different radar approaches to the fundamental challenge. e.g.

- Clutter data from existing windfarms has been measured and used to develop new signal processing techniques that improve the mitigation of existing radar systems.
- New techniques have been developed to synchronise multistatic radars and thus allow them to reject clutter more effectively. These synchronisation techniques have been experimentally tested at short ranges. A design for a full-scale system suitable for AD applications has been developed.

For Phase 3 we are looking for further development of these, or other radar processing approaches, culminating in a demonstration of how the innovation works in a representative environment and a detailed analysis explaining how it is expected to be applicable to future development of larger and bigger windfarms.

In this phase consideration of how the technology could be integrated into the existing air surveillance infrastructure must be given. The ability to work with a broad range of radar frequencies should be considered. Outcomes from the proposed project should include:

- An estimate of the probability of successfully tracking a variety of representative targets over the windfarm, both with and without the technology being applied.
- The impact (if any) of the proposed technology on tracking when there is no windfarm present.
- How the proposed radar(s) would be integrated with existing systems to produce a coherent air picture.
- What a realistic fully installed and operational network might look like and any obstacles to installation that might arise (e.g., transmission licences).

For further guidance about the demonstration requirements please see Section 3.4.4.

3.4.2. Materials Approaches

In this challenge we are looking for innovations around the incorporation of smart materials or surface structures into windfarm turbines that can be used to reduce the impact of clutter on radar surveillance

Work done in Phases 1 and 2 has explored

- the use of radar absorbing nano particle fillers in the bulk of windfarm turbine blades and
- metamaterial structures which can be tuned to reduce radar reflections from the turbine blades
- the integration of novel materials solutions into the existing turbine structures.

For Phase 3 we are looking for further development of these or other materials based approaches. Outcomes from the proposed project should include:

- What impact the proposed material would have on the RCS of the blades and turbine as a whole, including an assessment of the radar bandwidth over which this occurs and therefore how much each proposed solution would vary depending upon the local radars.
- RCS performance using a variety of polarisations of the radar beam such as vertical, horizontal and circular.
- How well the material would withstand a realistic offshore environment, including corrosion, salt spray etc.
- An assessment of the impact of the technology on other performance aspects of the turbine, such as longevity, susceptibility to lightning strike, loss of lift of the blade, increased blade leading edge erosion or other performance requirements (e.g., visual signatures).
- Assess any impact of the change of materials on recyclability and sustainability of the wind turbines.
- A realistic appraisal of how the proposed technology would be introduced into the supply chain and fitted in UK waters.
- An assessment of any security issues that may result from any radar absorbing materials tuned to UK defence radars being readily accessible in open water.

All solutions should be developed to a scale to allow demonstration on a representative turbine(s). Additionally, it will be necessary to obtain some representative radar information demonstrating the effectiveness of the material mitigation and to demonstrate how this performance would be maintained when applied to larger and bigger windfarms.

For further guidance about the demonstration requirements please see Section 3.4.4.

3.4.3. Alternative Tracking Approaches

In this challenge we are looking to fill the capability gap in surveillance cover for conventional long range air defence radars caused by the radar returns from wind turbines.

Work done in Phases 1 and 2 has explored the use of modular sensor networks based on RF, visual and acoustic passive sensors to create a composite surveillance picture which can be incorporated into the air defence system.

For Phase 3 we are looking for further development of these or alternative non radar based surveillance technologies. Outcomes from the proposed project should include:

- A demonstration of a candidate alternative tracking system in a realistic operational environment over a windfarm.
- An estimate of the probability of successfully tracking a variety of representative targets over the windfarm, both with and without technology being applied.
- How the proposed tracking system would be integrated with existing systems to produce a coherent air picture.
- What a realistic fully installed and operational network might look like.

- How well the equipment would withstand a realistic offshore environment, including corrosion salt spray etc.
- Any susceptibility of the system to hostile countermeasures (e.g., spoofing, emission control).
- Range of the alternative non radar based surveillance technologies beyond the turbine.

For further guidance about the demonstration requirements please see Section 3.4.4.

3.4.4. Demonstration Requirements

As part of this competition, we expect proposals to detail how they intend to validate/ demonstrate the performance of their mitigation at the end of the project. The application must specify the intended TRL of the demonstration (TRL 5 or 6). Bidders are required to arrange their own demonstrations, which meet the minimum requirements outlined in the relevant challenge areas above and Table 1 below:

Table 1 - Demonstration Requirements

Category	Requirements
General	<ul style="list-style-type: none"> • All demonstrations must be supplier-arranged • No requirement on MOD to supply assets at this stage • We accept that modelling will be required to extend to more realistic scenarios
Radar Approaches	<ul style="list-style-type: none"> • Operate radar looking at full-scale windfarm (preferably offshore) • Demonstrate performance of skeleton system against civil/opportunity targets • Not necessarily processed in real time
Materials Approaches	<ul style="list-style-type: none"> • Measure RCS changes of a full-scale blade (reduction vs. frequency & angle) • Place a modified turbine in a conventional windfarm and measure the false alarm rate • Demonstrate realistic operation for prolonged periods (may be onshore for cost reasons) • Accelerated ageing to demonstrate ability to survive in maritime environment
Alternative Tracking Approaches	<ul style="list-style-type: none"> • Demonstrated in a representative environment (e.g. fitted to windfarm (offshore preferred) for systems that are turbine-mounted or tracking over a wind farm for external sensors). • Test tracking vs. a variety of targets (civil/opportunity) in a wide range of weather (e.g. wind, visibility) & daylight conditions • Test impact of threats using emission control • Demonstrate how integration to the command and control system would be achieved.

4. Eligible costs

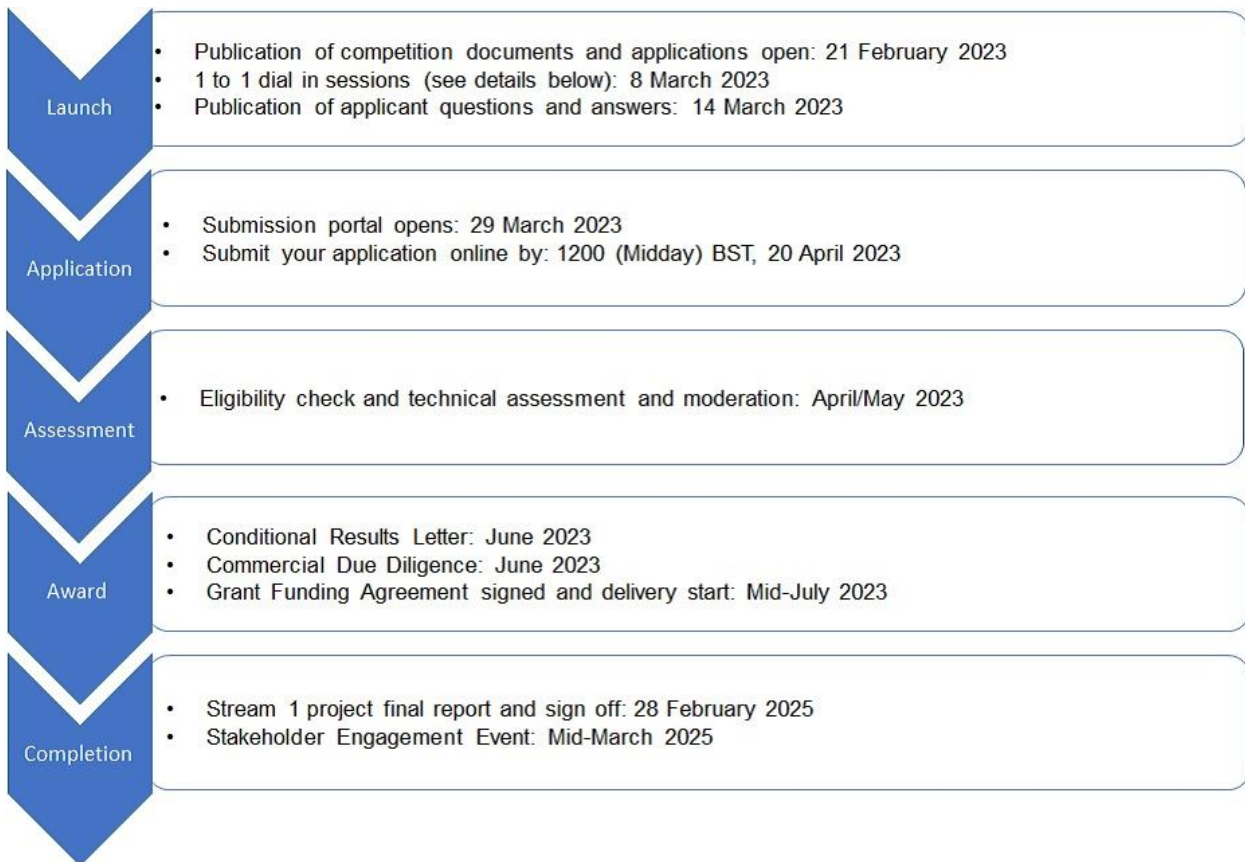
Eligible costs for Stream 1 are those directly associated with the development and implementation of the demonstration; see Appendix 2: Eligible and Ineligible Costs and Appendix 3: Residual Values for more information.

5. Competition Timetable, Application and Assessment Process

5.1. Competition Timetable

Key indicative dates applicable to Stream 1 of the competition are shown in Figure 2.22 below. Please note that we reserve the right to vary these dates.

Figure 2.22 - Stream 1 Timeline



Dial-in session – 8th March 2023 – A series of 20 minute one-to-one teleconference sessions, giving you the opportunity to ask specific questions. If you would like to participate, please register on the [Eventbrite page](#). Booking is on a first come first served basis.

If you have any questions about the competition, please submit them by 17:00 GMT, 7th March 2023 to accelerator@dstl.gov.uk; questions submitted after this deadline may not be answered.

We will provide replies to any questions (whether asked at the one-to-one sessions or sent in written form) which, in our judgement, are of material significance, through an online anonymised FAQ sheet published on the competition website by 14th March 2023. All applicants should take the answers to the clarification questions (Q&A) and this competition guidance into consideration when preparing their own bids. Bids will be evaluated on the assumption that they have done so.

5.2. How to Apply

IMPORTANT INFORMATION

Please make sure you have read this guidance (including Appendices and Annexes) before starting your application.

DASA Online Submission Service

The full proposal must be submitted via the [DASA Online Submission Service](#), for which you will require an account (instructions at the link). Only proposals submitted through the DASA Online Submission Service will be accepted. (For IT reasons, the Online Service will not be open until 29th March)

Offline DASA Submission Walkthrough

Offline DASA Submission Walkthrough ([Annex 4A](#)), is a key part of the submission process. Given that the commercial agreements will be with BEIS, some of the standard DASA application sections are not applicable. [Annex 4A](#) is an offline version of what you will see on the DASA Online Submission Service, but it also contains important supplementary notes, which will be essential in guiding you through the submission of the application online. We strongly recommend making yourself familiar with [Annex 4A](#) and having it open during the submission online to complete the application correctly and avoid unnecessary duplication.

Declaration Forms Submission by Email

You will also be required to complete, sign and submit five declarations via email to accelerator@dstl.gov.uk quoting the application number and 'Windfarm Mitigation Phase 3' in the subject. More detail on that in Section 5.3.2.

5.3. Submission Content

Each proposal must include the following information, which must be submitted in accordance with Sections 5.3.1 and 5.3.2 below.

You should endeavour to answer all questions on the DASA Online Submission Service in full. Incomplete applications and any containing incorrect information will be rejected.

Any applications or supporting documentation received after the application deadline will not be considered. Please do not leave the uploading of your bid to the last few days – please plan ahead and prepare well in advance.

5.3.1. DASA Online Submission Service

Complete all fields on the DASA Online Submission Service (consult [Annex 4A](#)). In the online submission you must attach the following documents, in the following sections:

Section 3 – Question (C) Feasibility:

- Project organogram (overview of the consortium)
- Partner Information Form ([Annex 5A](#))

Section 3 – Question (D) Viability:

- GANNT Chart Project Plan (including all work packages and deliverables)

Section 3 – Question (K):

- Project Cost Breakdown Form ([Annex 3A](#))

Section 3 – Question (R):

- Cyber Risk Assessment (confirmatory email from DCPD)

Section 5 – Additional Information:

- Project Risk Register
- Key Project and technical team (CVs not required)

5.3.2. Submission by Email

The following declarations must all be completed and submitted with your bid via email by the deadline. **The lead applicant is responsible for all the below Declarations being completed, submitted and accurate – see Annex 2A for details.**

The following forms can be found in [Annex 2A](#):

- Declaration 1: Statement of non-collusion
- Declaration 2: Form of bid
- Declaration 3: Conflict of Interest
- Declaration 4: Standard Selection Questionnaire (SSQ) Parts 1, 2 & 3

The following form can be found in [Annex 2B](#):

- Declaration 5: The UK General Data Protection Regulation Assurance Questionnaire for Contractors

Optional Letters of Intent can also be submitted as .pdf files via email.

5.4. Key information about your application

Application costs: You will not be entitled to claim from DASA or BEIS any costs or expenses that you incur in preparing your bid, whether or not your proposal is successful.

Bid Validity: Bids shall be valid for a minimum of 120 calendar days from the submission deadline.

Where required, your application may be shared in confidence with other government departments or public authorities during the assessment and due diligence phase to ensure there is no overlap between funded projects. Your public project abstract may be shared with others in BEIS and wider government for information purposes.

Consortia: Bids may be submitted by single applicants or project teams (consortia). For consortium bids, only one application should be submitted for each project.

The lead organisation must sign up to the terms and conditions outlined within the Stream 1 Grant Funding Agreement ([Annex 1A](#)). How the consortium manages the commitments that the lead organisation makes on its behalf is the responsibility of the consortium.

BEIS recognises that arrangements in relation to consortia and sub-contractors may (within limits) be subject to future change. Suppliers should therefore respond in the light of the arrangements as currently envisaged and are reminded that any future proposed changes in relation to consortia and sub-contractors must be submitted to BEIS for approval.

If a consortium is not proposing to form a separate corporate entity, the project partners will need to complete a consortium agreement. We would expect to see included the following non-exhaustive list:

- Arrangements for the management and coordination of the project
- Responsibilities (including funding) and liabilities of the partners
- IP arrangements
- Reporting and publication arrangements, access to results and confidentiality provisions
- Consequences of termination or default and ways of handling disputes

Please note that a consortium agreement will not be required at application stage but must be provided within one month of the funding agreement being signed. Funding will not be paid by BEIS until a signed consortium agreement has been finalised between all the members of the project consortium. BEIS reserves the right to require a successful consortium to form a single legal entity in accordance with Regulation 19 of the Public Contracts Regulations 2015 (as amended by the Public Procurement (Amendment etc.) (EU Exit) Regulations 2020).

Applicants will be required to provide information about their partners at application stage by completing the Partner Information Form ([Annex 5A](#)) and attaching it to the online submission service.

For the purposes of this competition, a project partner is likely to be an organisation responsible for the delivery of a significant innovative programme element or standard service; partners must sign the consortium agreement and use a grant intensity appropriate for their organisation and activity. A sub-contractor is likely to be an organisation delivering a standard service, as organised through a separate contract at market value. Sub-contractors will not be required to sign the consortium agreement. Subcontractors delivering more than 10% of the work (by value) must be named in the application, with information provided on the organisation size, what work they will be delivering, where the work will be located, who they are subcontracted to, justification for subcontracting the work, and evidence of their commitment to the project (e.g. a signed letter of support). If a small organisation, receiving a higher grant intensity, is subcontracting a significant portion (>20%) of labour or services to a large organisation, BEIS will review at assessment and due diligence stage whether this is appropriate and whether the funding requested is at an acceptable level; clarifications may be required. Sufficient detail and evidence for subcontractor costs is required in the stipulated documents e.g. in the Project Cost Breakdown Form. Typically, a supplier supplies goods, whereas a subcontractor supplies services.

Staff nationalities: Applicants are requested to provide the nationalities of proposed staff that you intend to work on this project in the DASA online submission service. If your proposal is recommended for funding, DASA reserves the right to undertake due diligence checks including the clearance of proposed employees. Please note that this process will take as long as necessary and could take up to 6 weeks in some cases for non-UK nationals.

5.5. Grant Award

Successful Stream 1 applicants should expect a Conditional Award Letter in June 2023 and, subject to commercial and financial due diligence, are expected to enter into Grant Funding Agreements **for the delivery to commence in mid-July 2023**. Please note that BEIS reserves its right to not award any grant agreements under this competition.

The terms and conditions will be based on the BEIS template Grant Funding Agreement provided in [Annex 1A](#). These terms and conditions are final and non-negotiable: by applying to the competition, you are agreeing to these terms and conditions.

There will be an opportunity for successful applicants, prior to the grant funding agreement being signed, to discuss the funding agreement at a meeting with official(s) from BEIS. The BEIS official(s) will explain the terms and conditions and respond to any queries which the applicant may have at this stage, but they will not allow any changes to be made to the funding agreement. It is crucial that all applicants review the terms and conditions prior to the submission of their application and ask any questions prior to submitting the bid.

For consortium bids, the lead company (project co-ordinator) will be the recipient of the funding agreement and will be responsible for managing payment to the other project partners.

6. Budget and Restrictions on Funding

6.1. Competition Budget and Availability

The total budget available for Stream 1 is up to £14.15m, excluding VAT (see [Appendix 2](#) for further guidance on VAT). The competition funding will be awarded via grants. Grant funding available per project is dependent on the challenge area. The maximum limits of grant funding per project are specified in Table 2 below. Grant Recipients shall provide match funding to cover the remainder of their project costs in accordance with the guidance set out in Section 6.2.

Table 2 - Grant limits per challenge

Challenge	Technology	Maximum Grant funding available per project
A	Radar	up to £4.5m
B	Stealthy Materials	up to £3.5m
C	Alternative Tracking	up to £1.5m
D	Integrated Demonstration of at least 2 of A/B/C	See Table 3 below

The actual number of projects funded depends on the number of eligible project applications and their quality. We intend to fund a minimum of 1 project per challenge area A, B and C. However, BEIS may also, at its discretion, choose not to fund projects in challenge areas A, B or C, if a project in challenge area D is deemed to sufficiently demonstrate the requirements outlined in challenge areas A, B or C. Multiple submissions are allowed, but they must be standalone projects with unique scope (no duplication) and must not be interdependent, e.g. if application for challenge D contains elements of A and B – supplier cannot submit a standalone application for the same element of A. We will make the final decision on which projects get funded, based on the number and quality of applications received and on a portfolio approach to ensure a good balance of technologies.

The maximum funding for projects in Challenge D will reflect the risk and amount of technological innovation involved in the project, as indicated in the Table 3 below.

Table 3 - Challenge D Maximum Funding

Challenge D: Indicative Funding Expectations	
Project addresses technologies from challenge A & B	Up to £8m
Project addresses technologies from challenge B & C	Up to £5m
Project addresses technologies from challenge A & C	Up to £6m
Project addresses ALL three technology areas	Up to £9.5m

BEIS reserves the right to allocate more or less than the total budget depending on the number and quality of applications received and budget availability. Bidders should not rely on there

being further funding available for the competition in excess of the allocated budget. BEIS may also, at its discretion, choose not to make an award or allocate an award that is less than the total budget depending on the quality of applications.

IMPORTANT INFORMATION

No Reliance

Nothing in this funding call requires BEIS to award any applicant a funding agreement of any particular amount or on any particular terms. BEIS reserves the right not to award any funding agreements.

Applicants apply for funding in this competition at their own risk and expense. BEIS will not, under any circumstances, be liable for nor make any contribution to the costs of participation, preparing proposals and taking any professional or specialist advice. Applicants accept the risk that they may not be awarded a grant. BEIS gives no guarantee or warranty as to the nature, or number of projects funded.

6.2. Grant Funding Intensities

The Stream 1 competition will support successful applicants through subsidies awarded in the form of grants towards the eligible costs of the proposal. Since 1 January 2021, public authorities must comply with the UK's international commitments on subsidies as set out in the UK-EU Trade and Co-operation Agreement (TCA), the Northern Ireland Protocol (where applicable), other trade agreements, as well as the World Trade Organisation (WTO) rules on subsidies¹. This section specifies the types of costs that applicants can claim grant support for, as well as the maximum level of grant funding that they can receive which may differ by organisation type, size, and location.

BEIS will operate within the UK-EU TCA requirements and WTO rules.² The funding rules set out in this Guidance Document are specific to this Competition only.

The rules set out in this document apply equally to all applicants from England, Wales, Scotland, and Northern Ireland that are eligible to receive funding (except where specifically indicated below, regarding the definition of a parent and associated grant intensity requirements). Grants awarded to applicants and partner organisations from Northern Ireland will also be subject to scrutiny from the European Commission in accordance with Article 10 of the Northern Ireland Protocol in the UK/EU Withdrawal Agreement.³

¹ <https://www.gov.uk/government/publications/complying-with-the-uks-international-obligations-on-subsidy-control-guidance-for-public-authorities>

² <https://www.gov.uk/government/publications/complying-with-the-uks-international-obligations-on-subsidy-control-guidance-for-public-authorities>

³ <https://www.gov.uk/government/publications/complying-with-the-uks-international-obligations-on-subsidy-control-guidance-for-public-authorities/technical-guidance-on-the-uks-international-subsidy-control-commitments#section7>

If a business or any enterprise has been incorrectly in receipt of grant funding, that enterprise is likely to be required to repay any subsidy received to the value of the gross grant equivalent.

Definitions

The following definitions will apply:

Business means an organisation undertaking economic activities. As given in Table 4 4, businesses are categorised as small, medium or large determined by both their:

- staff headcount; and,
- either turnover or balance sheet total

Table 4 4 - SME Definition

Company category	Staff headcount	Turnover	OR	Balance sheet total
Medium	< 250	≤£45m		≤£39m
Small	< 50	≤£9m		≤£9m

Applicants will be required to specify whether project costs classify as Experimental Development or Industrial Research in the Project Costs Breakdown Form at application stage.

Experimental Development means “acquiring, combining, shaping and using existing scientific, technological, business and other relevant knowledge and skills with the aim of developing new or improved products, processes or services. This may also include, for example, activities aimed at the conceptual definition, planning and documentation of new products, processes or services.

Experimental development may comprise prototyping, demonstrating, piloting, testing and validation of new or improved products, processes or services in environments representative of real life operating conditions. The primary objective is to make further technical improvements on products, processes or services that are not substantially set. This may include the development of a commercially usable prototype or pilot which is not necessarily the final commercial product and which is too expensive to produce for it to be used only for demonstration and validation purposes.

Experimental development does not include routine or periodic changes made to existing products, production lines, manufacturing processes, services and other operations in progress, even if those changes may represent improvements.”

Industrial Research this involves planned research or investigation aiming to gain new knowledge and skills for developing new products, processes, or services and/or significantly improving existing products, processes, or services. Work may include but isn’t limited to; making component parts for complex systems, building prototypes in a lab, or with simulated interfaces to existing systems, and trialing short manufacturing runs (pilot lines) if relevant.

Research Organisation Definition

When referring to research organisations, BEIS uses the following definition: “research and knowledge dissemination organisation’ or ‘research organisation’ means an entity (such as universities or research institutes, technology transfer agencies, innovation intermediaries, research-oriented physical or virtual collaborative entities), irrespective of its legal status (organised under public or private law) or way of financing, whose primary goal is to independently conduct fundamental research, industrial research or experimental development or to widely disseminate the results of such activities by way of teaching, publication or knowledge transfer. Where such entity also pursues economic activities, the financing, the costs and the revenues of those economic activities must be accounted for separately. Undertakings that can exert a decisive influence upon such an entity, for example in the quality of shareholders or members, may not enjoy a preferential access to the results generated by it.”

Within this competition, this means:

- universities (higher education institutions)
- non-profit research and technology organisations (RTOs), including Catapults
- public sector organisations (PSO)
- public sector research establishments (PSRE)
- research council institutes
- research organisations (RO)
- charities.

This list is not comprehensive and is subject to change and exceptions.

Grant Intensities

The maximum amount of grant funding that can be provided towards project costs (as a percentage of the overall eligible project cost) is summarised in Table 55. The maximum funding level available varies by organisation size and research category (activity). These maximum grant intensities apply to applicants and, if relevant, consortium partners.

If an application or partner business has a parent company, the data concerning the parent company and the applicant company (cumulatively) must be used when calculating the organisation size (as outlined in Table 4 4) and subsequent maximum grant intensity (as outlined in Table 55). For applicants and project partners based in Great Britain, a parent company is defined as an enterprise with controlling interest (>50% control) of the subsidiary company.

For applicants or project partners based in Northern Ireland, for the purposes of this competition, the definition of a parent company includes any ‘partner enterprise(s)’ or ‘linked enterprise(s)’ as defined in Annex I of the guidance linked in the footnote below.⁴ When calculating the organisation size (as outlined in Table 4 4) and subsequent maximum funding entitlement (as outlined in Table 55), applicants & project partners based in Northern Ireland must adhere to the instructions outlined in Annex I of the linked guidance.

⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02014R0651-20210801>

Table 55 - Maximum Grant Intensities

Research Category (type of innovation activity)	Organisation Size	Maximum amount of public funding towards total eligible Project Costs
Industrial Research (collaborative)	Small	80%
	Medium	75%
	Large	65%
Experimental Development (collaborative)	Small	60%
	Medium	50%
	Large	40%

Match funding must be provided for Stream 1. Confirmation that match funding will be available must be provided at application stage, for example a Letter of Intent from the funder/investor specifying their intent/agreement to provide an amount of funding and any conditions on that funding.

Before the grant letter is issued, the applicant will need to demonstrate a credible plan to raise the match-funding required for the whole lifetime of the project. This needs to be evidenced, for example by relevant bank statements, Memorandum of Understanding or agreement within the signed consortium agreement.

Debt and equity are acceptable sources of match funding, provided that this is accessible and projects are able to provide evidence of the availability of this funding by the first project milestone. In circumstances where equity or debt is not accessible for use against project costs by the first milestone, for example where equity has not been sold/released, this would not be an acceptable form of match funding. In kind contributions such as staff time can be included in the match funding total, as long as they relate to eligible project costs, are appropriately costed at a fair market value, and are robust, realistic and justified in terms of the proposed project plans.

Requirements

It is a requirement of receiving this funding that projects ensure that the results of the project are disseminated through e.g. conferences, publication, open access repositories, or free or open source software. See Section 13 for more information.

Compliance with grant intensity and overall funding limits is a further requirement of this Competition and the risk of non-compliance rests with the grant recipient. It is therefore crucial that you address these rules within your application, as any errors at this stage may result in BEIS being able to offer only a reduced level of funding or repayment of grant by applicants.

Grant recipients must adhere to all Subsidy Control obligations set out in the Grant Funding Agreement. Failure to do so may result in termination and clawback of funding.

If an applicant breaches the grant funding requirements for this Competition, for whatever reason, BEIS requires repayment of any grant received, including interest, above that which was due. In this situation applicants will be required to repay any funding received.

Whilst applications cannot be led by universities, we welcome university consortium partners when they can add value; there is no requirement to have academic involvement in an application. As with other government funding bodies funding higher education institutions, we will not pay more than 80% of the Full Economic Costs (FEC) calculated using the Transparent Approach to Costing (TRAC) methodology. Any applications requesting items that would ordinarily be found in a department, for example non-specialist computers, should include justification. Where applicable, other research organisations (i.e. Research and Technology Organisations) that are not higher education institutions, can receive up to 100% funding if they are **not** undertaking economic activities in the project. Our assumption is that the work undertaken as part of this programme is defined as economic activity.

Advice for Collaborative Applications

For collaborations containing different sized enterprises or research organisations, funding intensity is related to the partner company (and/or parent company if applicable) receiving the subsidy. Hence for example, for a collaborative Industrial Research project: a large enterprise consortium member can only be reimbursed up to 65% of its costs, whereas a small enterprise collaborator/partner can be reimbursed up to 80% of its costs. Similarly, for a collaborative Experimental Development project: a large enterprise consortium member can only be reimbursed up to 40% of its costs, whereas a small enterprise consortium member can be reimbursed up to 60% of its costs.

If you are applying to Stream 1 as a collaboration and your application is successful, you must also submit a copy of your consortium agreement within a month of the Grant Funding Agreement being signed. BEIS will review the consortium agreement before any grant payment is made to ensure that proposed collaborations are viable and robust. For collaborative projects BEIS will only issue a grant to a single legal entity, so collaborative bids will be required to appoint a lead organisation/applicant for grant award.

Projects may include a mix of industrial research and experimental development related costs. For such projects the maximum subsidy levels will be based on the individual thresholds for that type of research activity (further guidance can be found in the Project Cost Breakdown Form).

For example, a project led by a small business, 25% of whose costs classified as industrial research and 75% classified as experimental development, would have a maximum subsidy threshold, based on project out-turn costs, of 65%. A large business consortium partner, 50% of whose project costs classified as industrial research and 50% classified as experimental development, would have a maximum subsidy threshold, based on project out-turn costs, of 52.5%. This scenario is demonstrated in Table 666.

Table 66 - Maximum subsidy thresholds for research categories, as based on project out-turn costs

Business Size	Research Activity	Maximum Subsidy Threshold	Percentage of project	Effective Subsidy Threshold
Small business	Industrial Research	80%	25%	20%
	Experimental Development	60%	75%	45%
Maximum project subsidy rate	65%			
Large business	Industrial Research	65%	50%	32.5%
	Experimental Development	40%	50%	20%
Maximum project subsidy rate	52.5%			

Whilst BEIS will check the information provided to try and ensure that applicants meet the requirements of the subsidy categories, it is the responsibility of applicants to establish that they fall within the thresholds before submitting applications. BEIS requires applicants to notify them of any change to situation or circumstance during the project.

Calculating Other Public Funding

When considering levels of subsidy (described above), public funding includes the grant and all other funding from, or which is attributable to, other government departments, UK public bodies, other Governments or Government organisations. Such funding includes grants or other subsidies made available by those bodies or their agents or intermediaries (such as grant funded bodies).

In applying to this competition, you must state if you are applying for, or expect to receive, any funding for your project from public authorities (in the UK or elsewhere). Any other public funding will be cumulated with BEIS funding to ensure that the public funding limit and the subsidy intensity levels are not exceeded for the project. Public funding cannot be used as part of the match funding contribution.

Whilst BEIS will check the information provided to try and ensure that applicants meet the requirements of the subsidy categories, it is the responsibility of applicants to establish that they fall within the competition rules before submitting applications. BEIS requires applicants to notify them of any change to situation or circumstance during the project. It is essential to ensure that

the total grant funding for the project from public sources does not exceed the permitted percentages stated for the relevant subsidy category.

For any breach of subsidy requirements, please consult the generic grant funding agreement (GFA) that BEIS will be providing with this Guidance ([Annex 1A](#)). Grant recipients must adhere to all Subsidy Control obligations set out in Clause 15 of the Grant Funding Agreement. Failure to do so may result in termination and clawback of funding as per Clause 26.

As part of the assessment process, the added value and additionality of public funding will be tested. Applicants will need to demonstrate why public funding is required to deliver this project.

7. Eligibility for Funding

7.1. Competition Eligibility Criteria

To be eligible for funding under Stream 1, proposed projects must meet all the following eligibility criteria. These will be listed in the online application form as the Yes/No questions exemplified below. BEIS will consider all information on the application form when reviewing project eligibility. If, after reading this competition guidance, you are still uncertain whether your project is eligible, organisations may seek clarifications on eligibility by sending an email to accelerator@dstl.gov.uk during the Q&A clarification window.

1. Technology and Project Scope

Each funded project is required to deliver a demonstration project in one of the challenge areas A, B, C or D described in this guidance. Please see Section 3 for more detail on stipulations and exclusions of the project scope.

Eligibility question: Is this project and technology in scope? YES/NO

2. Innovation and Technology Readiness

A description of TRLs is provided in Appendix 1. This competition will support projects that can demonstrate and trial innovative technologies and processes which meet the following technology readiness requirements:

- a. It is expected that demonstrated technologies should be able to show an increase in maturity through testing and validation of components and sub-systems. The majority of project activity and the majority of project costs are expected to be delivering work at TRLs 5 to 6.
- b. The competition will not support projects aiming to finish the demonstration at TRL below 5 and above 6.
- c. The competition will not support any commercialisation activities or development or trial of solutions which are already commercially or widely deployed in the UK or internationally.

Eligibility question: Is the anticipated project demonstration at TRL 5-6? YES/NO

3. Project Activity

BEIS is unable to fund retrospective work on projects.

Eligibility question: Can you confirm that your application does not seek funding for retrospective work on this project? YES/NO

4. Project Timescale

Target dates for key project milestones will be agreed between the successful bidder and BEIS prior to awarding grant funding.

- It is anticipated that project delivery will begin in **mid-July 2023**, and all project work must be completed, and final report sent for approval by **Friday 28th February 2025**. This is approximately 19 months' timeline for all of the project activities.
- All projects will be required to attend a Stakeholder Engagement Event to present the outcomes of their work in **mid-March 2025**.

Eligibility question: Can you confirm that your project will be completed within the timescales set out? YES/NO

5. Additionality

Projects can only be funded where evidence can be provided that innovation would not be taken forwards (or would be taken forwards at a much slower rate) without public sector funding.

Eligibility question: Can you confirm that this project would not be taken forward (or would progress at a much slower rate) without public sector funding? YES/ NO

6. Contract Size and Match Funding

The maximum BEIS funding available will be dependent on the challenge area as outlined in Section 6.1 and the project teams must provide match funding in accordance with the guidance set out in in Section 6.2. Any other public funding required to deliver the project must be confirmed at application stage and cannot be used towards the match funding contribution.

Given the subsidy categories, applicants will need to have private funding in place to cover the balance of the eligible costs. Such funding may come from a company's own resources or external private sector investors but may not include funding attributable to any public authority. The level of private (match) funding for a project will depend on the status of the applicant organisation(s) and the specific nature of the proposed project; Section 6.2 provides details of the grant intensity levels. Before the grant letter is issued, the applicant will need to demonstrate a credible plan to raise the match-funding required for the whole lifetime of the

project. This needs to be evidenced, for example by relevant bank statements, Memorandum of Understanding or agreement within the signed consortium agreement.

Eligibility question: Can you confirm the funding requested from BEIS is below the maximum levels of funding specified in Section 6, and that you are able to source the required match funding for this project and that any other public funding required is already secured? YES/NO

7. Eligible Project Costs

The eligible costs are set out in Appendix 2: Eligible and Ineligible Costs

Guidance on capital costs and residual value is given in Appendix 3: Residual Values . The grant intensity thresholds are given in Section 6.2. Funding can only be used for activities and items directly required for the proposed project.

Eligibility question: Can you confirm that requested funding is for eligible costs only and meets the grant intensity thresholds? YES/ NO

8. Knowledge Sharing

Projects will be expected to share the knowledge gained through the funded activities publicly. See Section 9 for deliverables and Section 13 for dissemination requirements.

Eligibility Question: Do you agree to share the knowledge gained publicly and in line with Section 13? YES/NO

9. Applicants and Project Team Composition

Stream 1 applications can be led by a single organisation or by consortium. For consortium bids, a single project application must be submitted by the lead project member (the lead applicant or project co-ordinator) on behalf of the consortium.

Stream 1 applications must be led by private organisations or research and technology organisations (RTO) and may not be led by universities or non-commercial organisations. Similarly, other Government Departments, Agencies and local authorities are not eligible to enter as the lead applicant, but they can act as a project partner or sub-contractor. Special Purpose Vehicles are permitted to lead projects only if they are constituted as legal entities.

Eligibility Question: Do you confirm that this project is led by a private organisation or RTO, and if you or a member of your consortium are part of multiple funding applications, you/they would be able to successfully deliver all projects? YES/NO

10. UK Requirements

The lead applicant or project co-ordinator for the funded activities must be registered with Companies House. Projects can work with international partners but should aim to maximise the benefit to the UK. The physical demonstrations must be located in the UK.

Eligibility question: Can you confirm that the demonstration would be located in the UK? YES/NO

11. Regulatory Factors

You must consider any ethical / legal / regulatory factors relating to your proposal and how the associated risks will be managed?

For example, Ministry of Defence Research Ethics Committee (MODREC) approvals can take up to 5 months therefore you should plan your work programme accordingly. If you are unsure if your proposal will need to apply for MODREC approval, then please refer to the MODREC Guidance for Suppliers or contact your Innovation Partner for further guidance.

Eligibility question: Have you considered any ethical / legal / regulatory factors relating to your proposal and how the associated risks will be managed? YES/NO

12. Export Control:

You must consider any export control factors relating to your proposal and how the associated risks will be managed. If we believe that you will not be able to obtain export clearance, additional checks may be conducted, which may also result in your proposal being sifted out of the competition.

Eligibility question: Have you considered any export control factors relating to your proposal and how the associated risks will be managed? YES/NO

7.2. General BEIS Conditions

Applicants must not meet any of the BEIS grounds for mandatory rejection, and as a general rule they should not meet any of the BEIS grounds for discretionary rejection (see [Annex 2A](#) for Exclusion Grounds). Applicants will be required to declare this as part of completing the Standard Selection Questionnaire.

There are five declaration forms to be completed (see [Annex 2A](#) and [Annex 2B](#)):

- Declaration 1: Statement of non-collusion
- Declaration 2: Form of bid

- Declaration 3: Conflict of Interest
- Declaration 4: Standard Selection Questionnaire (SSQ) Parts 1, 2 & 3
- Declaration 5: The UK General Data Protection Regulation Assurance Questionnaire for Contractors

See Section 5.3.2 for details on how to submit these declarations.

7.3. Conflicts of Interest

The BEIS standard terms and conditions include reference to conflict of interest and require contractors to declare any potential conflict of interest to the Secretary of State.

For research and analysis, conflict of interest is defined as the presence of an interest or involvement of the contractor, subcontractor (or consortium member) which could affect the actual or perceived impartiality of the research or analysis.

Where there may be a potential conflict of interest, it is suggested that the consortium or organisation designs working arrangements such that the findings cannot be influenced (or perceived to be influenced) by the organisation which is the owner of a potential conflict of interest. For example, consideration should be given to the different roles which organisations play in the research or analysis, and how these can be structured to ensure an impartial approach to the project is maintained.

This is managed in the procurement process as follows:

- During the bidding process, applicants may contact BEIS to discuss whether or not their proposed arrangement is likely to yield a conflict of interest.
- **Suppliers are asked to sign and return Declaration 3** to indicate whether or not any conflict of interest may be, or be perceived to be, an issue. If this is the case, the contractor or consortium should give a full account of the actions or processes that it will use to ensure that conflict of interest is avoided. In any statement of mitigating actions, contractors are expected to outline how they propose to achieve a robust, impartial and credible approach to the research.
- When bids are assessed, this declaration will be subject to a pass/fail score, according to whether, on the basis of the information in the proposal and declaration, there remains a conflict of interest which may affect the impartiality of the research.
- Failure to declare or avoid conflict of interest at this or a later stage may result in exclusion from the procurement competition, or in BEIS exercising its right to terminate any grant awarded.

Applicants will be subject to financial viability checks, as described in Section 11.1. The outcome of BEIS financial due diligence may result in preferred bidder(s) not being awarded a grant.

8. DASA Assessment Process and Criteria

8.1. Assessment Process

DASA is responsible for running the competition and the assessment process outlined in this section. All submitted applications will pass through an initial sift against all the eligibility criteria described in Section 7.1, and then against the assessment criteria outlined below in Section 8.2, which are based on the competition objectives. The assessment process following the pre-sift can be found on the [DASA website](#), but involves these key stages:

Assessment: After the initial sifting process, experts from across UK government will be assigned to assess your proposal.

Moderation: After assessment, a moderator will compile an overview of all assessments, pulling together comments to provide a collective outcome in the form of a 'Fund' or 'No Fund' recommendation against the proposal.

Challenge: Stakeholders/moderators are invited to challenge the 'Fund' or 'No Fund' recommendation made against each proposal. Challengers should present their argument both in written form for circulation and at the decision conference.

Decision conference: Key stakeholders come together to discuss the recommendations. The moderator attends the decision conference to present the 'Fund' or 'No Fund' recommendation for the proposal and to defend the proposal against any challenges that may have been submitted. Challengers attend the decision conference to present their challenges in order to promote robust discussion prior to the 'Fund' or 'No Fund' decision being made. During the decision conference, the decision will be made as to whether the projects remain fundable, then a priority list is prepared from those. At the end of the decision conference, the priority list will be taken forward to due diligence (depending on affordability). Innovators are not permitted to attend the Decision Conference.

We will select projects that best meet the Programme's objectives, offer value for money and present effective project delivery approaches. We reserve the right to select projects that contribute to a balanced portfolio of projects in line with the different technical areas, overall programme objectives and budget availability. The decisions are final, and no challenges will be considered or entered into. Proposals that are unsuccessful will receive brief feedback after the Decision Conference.

DASA reserves the right to disclose on a confidential basis any information it receives from innovators during the procurement process (including information identified by the innovator as Commercially Sensitive Information in accordance with the provisions of this competition) to any third party engaged by DASA for the specific purpose of evaluating or assisting DASA in the evaluation of the innovator's proposal. In providing such information the innovator consents to such disclosure. Appropriate confidentiality agreements will be put in place.

8.2. Assessment Criteria

Proposals that pass the Stage 1 pre-sift against the eligibility criteria will be assessed against the following criteria:

- **desirability:** strategic fit, end user support/pull
- **feasibility:** technical credibility, innovation, risk, expertise of team/capability
- **viability:** costs and value for money, project delivery/plan

Each of the three criteria carries a 33.3% weighting. Guidance on the type of information that is required in your proposal can be found in [Annex 4A](#).

8.3. Cyber Risk Assessment

Supplier Assurance Questionnaire (SAQ)

DASA has completed a Cyber Risk Assessment (CRA) for this competition. In order to submit to this competition innovators are required to work towards cyber resilience. If selected for funding, the innovator must prove cyber resilience before funding will be provided under this competition.

It is not mandatory to compete this before submission but we strongly advise Innovators complete a [Supplier Assurance Questionnaire](#) (SAQ), using the DASA Risk Assessment Reference (RAR) for this competition: RAR-165322475 and answer questions for risk level “Very Low”.

Defence Cyber Protection Partnership

The Defence Cyber Protection Partnership (DCPP) will review your SAQ submission and respond with a reference number within 2 working days. The resulting email response from DCPP should be attached (.jpg or .png format) and included within the DASA submission service when the proposal is submitted. You will also be asked to enter your SAQ reference number. Please allow enough time to receive the SAQ reference number prior to competition close at midday on 20 April 2023.

If the proposal is being funded, the SAQ will be evaluated against the CRA for the competition, and it will be put it into one of the following categories:

1. compliant – no further action
2. not compliant – if successful in competition and being funded the innovator will be required to complete a Cyber Implementation Plan (CIP) before the grant is awarded

Innovators can enter a proposal without all controls in place, but are expected to have all the cyber protection measures necessary to fulfil the requirements of the project in place at the time of grant award, or have an agreed Cyber Implementation Plan (CIP).

The CIP provides evidence as to how and when potential innovators will achieve compliance. Provided the measures proposed in the Cyber Implementation Plan do not pose an unacceptable risk to the MOD, a submission with a Cyber Implementation Plan will be considered alongside those who can achieve the controls.

A final check will be made to ensure cyber resilience before the grant is awarded. Commercial staff cannot progress without it. This process does not replace any project specific security requirements.

Further guidance for completing this process can be requested by emailing the DASA Help Centre: accelerator@dstl.gov.uk

Additional information about cyber security can be found at: [DCPP: Cyber Security Model industry buyer and supplier guide](#).

9. Deliverables

All Stream 1 projects will be expected to deliver:

- A physical demonstration of their technology
- Knowledge dissemination activities (see Section 13 for more information)
- An evidence-based final project report
- A concise version of the final project report that can be published.

The evidence-based final report should detail:

- the design and development of the demonstration
- demonstration trials results, including performance of the solution and detailed technical data
- the expected performance of the solution at full scale
- assessment of the benefits and challenges of the solution and process risks
- environmental, safety and regulatory considerations and requirements
- how the process could be scaled and replicated more widely, including potential costs of the solution at full scale and comparison with incumbent technologies e.g., indicative costs of capex increases.
- key successes and lessons learned in the project
- how to address any risks, challenges and uncertainties associated with the proposed technology
- An assessment of how the process, technologies and knowledge will continue to be developed, commercialised and/or used after funding ends,
- an implementation plan of how the project will be developed further after the end of the BEIS project funding

If there are aspects of the final project report which are commercially confidential, then project teams will be required to provide a version of the report that can be published. Omissions on the basis of commercial reasons should be discussed with DASA/BEIS at the earliest opportunity once the grant has been awarded.

BEIS will appoint a Monitoring Officer to each project to monitor the delivery of the project deliverables and review submissions. Project teams will be required to meet with their Monitoring Officer at least monthly. For more information about the monitoring and reporting requirements for this Competition, see Section 10.

9.1. Stage Gates

The projects will undergo a stage gate approximately every 6 months, so there will be two or three stage gate reviews for Stream 1 projects. The purpose of the stage gates is to review the technical, commercial and financial progress towards the agreed objectives for each project and they provide an opportunity for the projects to demonstrate their capability to deliver the remaining duration of the project. There are three possible outcomes of the process: 'Continue', 'Rectify' or 'Terminate'.

The projects will share document(s) 2 weeks in advance of the meeting summarising their progress, including technical, financial, schedule, risks and issues. The reviewing panel may include, but is not limited to, the BEIS theme lead, BEIS programme and project managers, DASA/Dstl Monitoring Officers and independent technical experts, which may be internal to BEIS or through a BEIS contractor. Projects will be assessed considering criteria such as technical, schedule, finance, quality, resource, risks and issues.

For Stream 1, the first stage gate is expected to occur around February 2024. The exact timing and requirements for this stage gate will be similar across projects but will be agreed between individual projects and BEIS prior to contracts being signed, based on the specific requirements of the project. The anticipated requirements for this stage gate are:

1. Detailed mobilisation and demonstration planning documents:
 - a. Updated project plan and evidence that delivery plan can achieve all objectives, including being complete by February 2025
 - b. Updated detailed risk register, mitigation strategies and contingency planning
2. Formalisation of all key supply chain relationships. Heads of terms/final draft commercial contracts for key work packages and draft end-user commercial contracts if applicable (note – this is applicable for sub-contractors/suppliers only, details of project partners must be provided at application stage, with a consortium agreement completed within one month of the Grant Funding Agreement being signed)
3. Evidence of planning permission/certificate of lawfulness obtained for build and operation of the demonstrator (where relevant), or at minimum pre-application checks and a provisional plan for approval
4. Evidence of compliance with relevant regulations and consultation with relevant authorities (where relevant). Evidence of reviewing and accounting for the relevant environmental and safety guidelines and that all appropriate approvals are in place for the demonstrator
5. Proof of match funding e.g. bank statement, MoU or section in consortium agreement
6. Where needed, Final Investment Decision taken for full project

The stage gate will include a discussion between the project team, the monitoring officer, technical experts and BEIS representatives focussed on the progress, delivery plan and the key risks and challenges. The discussion will ascertain how well the project is progressing against the criteria, as well as whether any of the residual risks are unacceptable to BEIS and the project team, to make a joint decision on if/how to progress. Where, in the opinion of the BEIS project team, unsatisfactory progress has been made, the BEIS Senior Responsible Owner will review the evidence and make the final decision on progressing.

Subsequent stage gates will occur at approximately 6 month intervals. The exact timing and requirements for these stage gates will be agreed between individual projects and BEIS prior to contracts being signed. It may be based on project specific milestones, such as final design or construction.

10. Monitoring and Reporting

10.1. Project Monitoring and Reporting

If successful, each project will be required to submit a completed **BEIS project plan and finance form** (template to be provided by BEIS), to be signed off by BEIS prior to the start of delivery. This will provide information about the project's deliverables, milestones and invoice schedule.

This competition also has a requirement to demonstrate the key performance indicators (KPIs) for the wider Net Zero Innovation Portfolio. Project monitoring and reporting is required to track project progress against these KPIs, as well as progress towards milestones.

The programme will be overseen by a BEIS Programme Manager. Each project will be allocated a Monitoring Officer at the point of notification. **For this competition the Monitoring Officer function will be performed jointly by a Technical Partner from Dstl and a Project Manager from DASA.** External organisations will be subject to a confidentiality agreement. Applicants will undertake their own project management and will be overseen by their appointed Monitoring Officer. Projects are required to engage with the appointed project monitoring officer regularly and effectively throughout the duration of the project. In addition, the DASA/BEIS team will work with you to support delivery and exploitation including, when appropriate, introductions to end-users and business support to help develop their business.

Regular project monitoring and reporting will take three forms:

1. Project teams will be required to meet with their Project Manager and Technical Partner at a kick-off meeting (planned for mid-July) and then once per month to update on project progress. Projects will share a slide pack covering progress, project achievements, technical challenges, spend against forecast, invoice update, risks and issues and RAG.

2. Projects will be required to submit a project progress report every quarter. We expect this report to cover, as a minimum:
 - progress against the project delivery plan and project milestones
 - upcoming work over the next quarter
 - financial information (including budget spend so far and budget forecast)
 - an updated risk register (including flagging where risk ratings have changed or new risks/issue have emerged)
 - recent highlights and outputs
 - any key lessons learnt during delivery, and progress against relevant programme benefits.
3. Projects will be required to undergo approximately two or three stage gate reviews, as per Section 9.1.

Projects will also be required to share deliverables and a final project report, as per Section 9.

It is important to allow for this work, as well as the milestone invoicing, when resourcing the project management and reporting element of the demonstration project.

10.2. Milestones and Invoicing

Milestone payments will only be made by BEIS after an agreement has been signed between the applicant and BEIS. Further details on payments and financial requirements will be provided by BEIS as part of any funding agreement. These will include the requirement for detailed statements of expenditure and requests for funds in a specified format. Payments will be made on a milestone basis upon receipt of a detailed statement of expenditure. They will be subject to satisfactory progress against the project's work plan. The exact milestones and associated payment amounts will be agreed on a project-by-project basis prior to the start of delivery.

Applicants must satisfy the due diligence, financial and organisational checks required prior to receiving public funds.

Milestone claims for Stream 1 must be invoiced in time to be processed and paid by 31st March 2025. If circumstances outside the control of the project occur which impact on delivering the expected outputs, the project must inform their Monitoring Officer as soon as possible. The Monitoring Officer will consult with BEIS to determine the best course of action.

After each stage of work is completed, you will be expected to complete and submit a claim form. Claims should be submitted to the Monitoring Officer for processing and will be paid within 30 working days of a complete and satisfactory claim being received. Finance is released against work carried out rather than a lump sum on approval.

For a milestone invoice, BEIS expects a complete invoice cover sheet (template to be provided by BEIS), a company headed invoice from the lead organisation and evidence that the milestone deliverables are complete. BEIS will only pay projects for actual costs and in arrears of work

done. Projects must provide BEIS with evidence of work done and costs incurred with each invoice. Acceptable evidence of work done will be agreed with BEIS in advance. Evidence of work done and costs incurred will be checked by the Monitoring Officer for quality before the invoice can be approved and payment can be made. Typical submission requirements with an invoice are as follows but are subject to change:

- Evidence of **work done** that is being claimed for; this should be as per the agreed evidence outlined in the BEIS Project Plan and Finance Tables document that is to be completed during grant award stage. This should prove that the work being claimed for has been done e.g., written reports, drawings, presentations, photographs of equipment, meeting minutes, test data, etc.
- Evidence of **costs incurred**:
 - A breakdown of all costs should be given across the partners and across each cost category (labour & overheads, materials, capital, subcontract, travel & subsistence and other). This breakdown should be given for each consortium organisation (lead organisation and partner organisations).
 - Labour & Overheads claim (for lead and project partners) taking the form of a consolidated time sheet for the invoiced milestone containing each member of staff, labour cost (day rate based on annual gross salary plus employer contributions), number of days spent on project milestone, overheads, and total labour costs including overheads.
 - For materials, capital, subcontract, travel & subsistence, and other costs, an itemised list with costs must be submitted along with invoices and proof of payment for any items over £10k (excluding VAT).

10.3. Project changes and change control

BEIS recognises the importance of remaining flexible and pragmatic throughout project implementation and will consider changes to ensure the most effective use of funds. Any change that impacts the delivery of the project must be identified, documented and effectively assessed to ensure that the consequences of that change are understood as part of the decision-making process. Projects will discuss any changes (e.g. to time, budget, project team, scope etc.) with their Monitoring Officer and where required will submit a change request to BEIS for approval. Requesting a significant change may necessitate a re-examination of project purpose or implementation or in some circumstances, may invalidate the GFA. An updated work plan and budget may also be needed when requesting changes.

10.4. NZIP Key Performance Indicators

BEIS requires all funded projects under the Net Zero Innovation Portfolio (NZIP), including all projects in this programme, to report on key performance indicators (referred to as NZIP KPIs) to provide a consistent approach to reporting evidence, and to track and measure key outputs,

outcomes and impacts. The evidence collected is used to demonstrate the impact of the NZIP on achieving the government's Net Zero ambitions and is necessary to be able to run future competitions.

Project lead organisations will be required to report on KPIs at various intervals for each project, including at the start of the project, during project delivery, at project closure and for three years after project closure. BEIS will supply funded projects with a reporting template to complete at set intervals, and recipients are expected to return the template to their Monitoring Officer upon completion, who will review and quality assure it. At project start, your BEIS Monitoring Officer will provide further details about the calculation of these KPIs and assist with the initial completion and measurement.

Please note that it may at times be necessary to make changes to the NZIP KPIs, data collection modes or frequencies. We will endeavour to keep all changes to a minimum and communicate any implications to you via the Monitoring Officers in advance of collection.

BEIS will be collecting the following KPIs. Not all data will be collected annually.

KPI	KPI description	Metrics
KPI 1	Number of NZIP projects supported	<ul style="list-style-type: none"> Project start and completion.
KPI 2	Number of NZIP projects that have met objectives	<ul style="list-style-type: none"> Extent to which project objectives have been met to date. Change in objectives and reasons for change
KPI 3	Number of organisations supported to deliver the project	<ul style="list-style-type: none"> Lead partner delivering the project: name, organisation size and number and type of jobs supported within the organisation to deliver the project. Other partner organisations involved in delivering the project as named on the Contract or Grant: name, organisation size and number and type of jobs supported within the organisation(s) to deliver the project.
KPI 4	Number of active contractual and non-contractual business relationships supported	<ul style="list-style-type: none"> Number of contractual relationships: name and type of contractual relationship. Number of informal non-contractual business relationships: name and type of non-contractual relationship. Extent to which your organisation expanded its network of business relationships as a result of the project
KPI 5	Technology Advancement	<ul style="list-style-type: none"> Technology Readiness Levels (current and anticipated). Other technology improvement indicators: patents applied for or granted; academic, technical or non-technical publications generated and knowledge exchange events attended (such as conferences)
KPI 6i	Initial Financial Leverage to deliver project	<ul style="list-style-type: none"> Project funding structure: Amount in £m of BEIS, Other Public Sector and Private Funding.
6ii	Follow-on Funding secured	<ul style="list-style-type: none"> Amount of follow-on funding raised and the source (public or private).

KPI 7i	Reduction in the unit cost of energy	<ul style="list-style-type: none"> • Scope and scale of impact on reducing energy costs including: • Capital and operating cost reduction • Calculation of potential benefits in 2032 • Alternative approaches are available where above data is not available
7ii	Increase in energy efficiency/ Reduced energy demand	<ul style="list-style-type: none"> • Scope and scale of impact on reducing energy demand/increasing energy efficiency including: • Reduction in energy used in MWh • Calculation of potential benefits in 2032 • Alternative approaches are available where above data is not available
7iii	Increase in energy system flexibility	<ul style="list-style-type: none"> • Scope and scale of impact on energy system flexibility including: • The peak power which could be controlled through the flexibility technology (MW) • The duration of the controlled load, generation or storage capacity (hours) • Calculation of potential benefits in 2032
KPI 8	Commercialisation advancement	<ul style="list-style-type: none"> • Commercial readiness levels (current and anticipated) • Steps towards commercialisation incl. licensing agreements, commercial partnerships, product certifications etc.; national/ international standards passed • UK and International sales secured and their value (£m)
KPI 9	CO2 emissions reductions	<ul style="list-style-type: none"> • Scope and scale of project impact on carbon emissions • Route to achieving carbon emissions reductions
KPI 10	Policy impact	<ul style="list-style-type: none"> • Whether, how, and to what effect evidence from the project has informed policy development • Whether projects have engaged in activities with industry or civil society

10.5. Evaluation requirements

Beyond these NZIP KPIs, BEIS conducts independent evaluations of many of its programmes. The funded project organisation will be required to collaborate in reasonable evaluation activities, including, but not limited to, providing programme-specific KPIs, completing questionnaires or surveys, participating in interviews and workshops, communicating the learnings from the project, providing costs/sales data and elaboration of any of the measures covered in the NZIP KPIs.

11. Financial Information

Applicants are requested to provide a fixed price quotation for the work. A detailed cost breakdown is required to enable assessment of value for money. Financial information should include costs for the project, detailing labour (including labour rates), material and capital equipment costs, and any travel and subsistence requirements. Applicants are required to complete a Project Cost Breakdown Form ([Annex 3A](#)) as part of the application process.

11.1. Financial viability checks

BEIS will carry out financial due diligence on all preferred bidder(s). This may include, but not be limited to, credit checks and the detailed scrutiny of comprehensive reports resulting from said credit checks.

BEIS may need to check with bidder(s) that the information within the report is correct. BEIS may also request the latest accounts and financial information from the preferred bidder(s).

Financial due diligence checks will include looking at the latest independently audited accounts filed on the Companies House database. BEIS reserves the right to also verify the financial viability of all project partners and key sub-contractors.

Where a business is not required to file accounts with Companies House, other financial information may be requested to enable an appropriate financial viability review to be undertaken. We will be looking for evidence of your ability to resource the cashflow for the project appropriately, so the information we request will be focused on understanding how your business operates in this respect.

The outcome of BEIS financial due diligence may result in preferred bidder(s) not being awarded a GFA.

Before your project starts, BEIS will ask for evidence that you have the funding mechanisms in place to manage your cash flow across the life of your project. This could include letters of credit or other such mechanisms.

BEIS will not make payments in advance of need and typically makes payments in arrears on satisfactory completion of agreed milestones and deliverables. BEIS understands, however, the difficulties which small businesses may face when financing this type of project. BEIS will explore cash flow issues with the applicant as part of developing the financial and milestone profile during the grant award process. BEIS will offer flexibility in terms of profiles and payments, within the confines of the requirements for use of public money within which it operates.

12. Notifications and Publication of Results

12.1. Notification

Applicants will be informed by email whether their application has been successful.

BEIS/MOD may wish to publicise the results of the competition, which may involve engagement with the media. At the end of the application and assessment process, BEIS/MOD may issue a press release or publish a notice on its website. These public documents may, for example, outline the overall results of competitions and describe some of the projects to be funded.

Some organisations may want their activities to remain confidential and you will be given a chance to opt out of any involvement in media relations activity and further case study coverage of projects, should you see this as being absolutely necessary. However, the public description of the project you provide in your application will be made available in the public domain if your application is successful, and you are not able to opt out of the project description being published.

12.2. Publication of Results

In return for the provision of funding, BEIS expects to be able to use and share the results and outputs of the activities with other government departments.

When submitting your proposal, you will be required to include a title and a short abstract. The title and abstract you provide will be used by DASA, and other government departments, to describe your project and its intended outcomes and benefits. They may be included at DASA events in relation to this competition and in documentation such as brochures. The proposal title will be published in the DASA transparency data on GOV.UK, along with your company name, the amount of funding, and the start and end dates of your contract. As this information can be shared, it should not contain information that may compromise Intellectual property.

BEIS also wishes to publicise details of the award recipients. Therefore, on or after issuing a Grant Offer letter, BEIS will publish the following information:

- Identity of the participant and its partners
- Project summary information including aims and expected outcomes of the project and technology area
- Total award value

Following completion of the funded projects, DASA/BEIS will publish on its website a summary of the funded activities and the outcomes achieved. This will include a final project report from

each project detailing technical approach and key achievements. BEIS may also revisit projects at a later date and publish an evaluation report for the scheme as a whole.

BEIS, however, recognises the need to maintain confidentiality of commercially sensitive information. We will consult applicants regarding the nature of information to be published, to protect commercially sensitive information. BEIS will further report the outcome of the Stream 1 Competition on the UK's Subsidy Database,⁵ in line with the UK Subsidy Control guidance.

13. Knowledge Dissemination Requirements

Stream 1 projects will be required to contribute to a minimum of two knowledge dissemination activities to a range of stakeholders. Projects will be expected to engage with industry conferences or trade shows, as well as engaging in wider knowledge dissemination activities.

All projects will be required to attend a DASA/BEIS organised Stakeholder Engagement Event to present the outcomes of their work in mid-March 2025. To fulfil the requirement of minimum two knowledge dissemination events, the specific activities to be delivered are at the discretion of the project and will be agreed at project award.

Projects must agree to publish non-confidential project outcomes. This must include a comprehensive final project report, as well as other outputs and provisional findings throughout the project lifecycle, to enable knowledge dissemination. Specific outputs and timings will be agreed with projects before the GFA is signed.

14. Intellectual Property Requirements

The proposed arrangements for intellectual property rights (IPR) and exploitation of IPR are set out in clause 16 of the GFA ([Annex 1A](#)) for this competition, and outlined below for reference.

⁵ <https://searchforuksubsidies.beis.gov.uk/>

16 INTELLECTUAL PROPERTY RIGHTS

- 16.1 Intellectual Property in all IPR Material will be the property of the Grant Recipient. Other than as expressly set out in these Conditions, neither Party will have any right to use any of the other Party's names, logos or trade marks on any of its products or services without the other Party's prior written consent.
- 16.2 The Grant Recipient grants to the Authority a non-exclusive irrevocable and royalty-free, sub-licensable, worldwide licence to (a) disclose to and authorise use, in confidence, of all the IPR Material within any United Kingdom Government Department (which term shall include the United Kingdom Armed Forces) and the UK police and civil defence agencies, for any purposes, and (b) to disclose to and authorise use, in confidence, by any party under, and solely for the purposes, of an agreement awarded under the future DASA Windfarm Mitigation for UK Air Defence Phase 3 Stream 2 competition.
- 16.3 Ownership of Third Party software or other IPR necessary to deliver Funded Activities will remain with the relevant Third Party.
- 16.4 The Grant Recipient must ensure that they have obtained the relevant agreement from the Third Party proprietor before any additions or variations are made to the standard 'off-the-shelf' versions of any Third Party software and other IPR. The Grant Recipient will be responsible for obtaining and maintaining all appropriate licences to use the Third Party software.

15. Confidentiality and Freedom of Information

The Freedom of Information Act 2000 (“FOIA”) and the Environmental Information Regulations 2004 (“EIR”) apply to the Department.

You should be aware of the Department’s obligations and responsibilities under FOIA or EIR to disclose, on written request, recorded information held by the Department. Information provided in connection with this competition exercise, or with any grant that may be awarded through this exercise, may therefore have to be disclosed by the Department in response to such a request, unless the Department decides that one of the statutory exemptions under the FOIA or the exceptions in the EIR applies. Where any request is made to BEIS under the FOIA for the release of information relating to any project or applicant, which would otherwise be reasonably regarded as confidential information, BEIS will notify you of the request as soon as we become aware of it.

If you wish to designate information supplied as part of your bid as confidential, or if you believe that its disclosure would be prejudicial to any person’s commercial interests, you must provide clear and specific detail as to the precise information involved and explain (in broad terms) what harm may result from disclosure if a request is received, and the time period applicable to that sensitivity. Such designation alone may not prevent disclosure if in the Department’s reasonable opinion publication is required by applicable legislation or Government policy or where disclosure is required by the Information Commissioner or the First-tier Tribunal (Information Rights).

As part of the application process all applicants are asked to submit a public description of the project. This should be a public facing form of words that adequately describes the project but that does not disclose any information that may impact on Intellectual Property (IP), is confidential or commercially sensitive. The titles of successful projects, names of organisations, amounts awarded, and the description of the project may be published once the award is confirmed as final.

By submitting a bid, you agree that your participation in this procurement may be made public. Aside from the public description of your project (see above), the answers you give in this response will not be published on the transparency web site (but may fall to be disclosed under FOIA or EIR (see above)). Where bid documents issued by the Department or contracts with its suppliers fall to be disclosed the Department will redact them as it thinks necessary, having regard (inter alia) to the exemptions/exceptions in the FOIA or EIR.

All assessors used during the assessment of applications will be subject to a confidentiality agreement.

16. Terms and Conditions

The Department's Standard Grant Funding Agreement as amended for the purposes of this competition will apply to this competition (see [Annex 1A](#)).

17. Further Instructions to Bidders

We reserve the right to amend the enclosed competition documents at any time prior to the publication of supplier Q&A. Any changes are most likely to adjust editorial errors and include FAQs from questions asked from stakeholders/applicants. Any such amendment will be numbered, dated and issued on the website. Where amendments are significant, we may, at our discretion, extend the deadline for receipt of bids.

We reserve the right to withdraw this opportunity without notice and will not be liable for any costs incurred by bidders during any stage of the process. Bidders should also note that, in the event a proposal is considered to be fundamentally unacceptable on a key issue, regardless of its other merits, that proposal may be rejected. By issuing this competition document, we are not bound in any way and do not have to accept the lowest, or any, proposal.

17.1. Definitions

Please note that references to the "Department" throughout these documents mean The Secretary of State for Business, Energy and Industrial Strategy acting through his/her representatives in the Department for Business Energy & Industrial Strategy.

17.2. Data Protection and Security

The successful bidder must comply with all relevant Data Protection Legislation, as defined in the terms and conditions applying to this Grant Competition. A guide to the UK General Data Protection Regulation (GDPR) published by the Information Commissioner's Office, can be found [here](#).

[Annex 2B](#) contains a "The General Data Protection Regulation Assurance Questionnaire for Contractors" (Declaration 5) to evidence the extent of readiness. The Authority may ask the Contractor to provide evidence to support the position stated in the questionnaire. The Authority may require the successful Contractor to increase their preparedness where the Authority is not satisfied that the Contractor will be in a position to meet its obligations under the terms and conditions. If the Contractor fails to satisfy the Authority that it will be in a position to meet its

obligations under the terms and conditions in the event that the Contractor is successful, the Authority reserves the right to exclude the bidder from this procurement.

17.3. Non-Collusion

No bid will be considered for acceptance if the contractor has indulged or attempted to indulge in any corrupt practice or canvassed the bid with an officer of BEIS or DASA. [Annex 2A](#) contains a "Statement of non-collusion" (Declaration 1); any breach of the undertakings covered under items 1 - 3 inclusive will invalidate your bid. If a contractor has indulged or attempted to indulge in such practices and the bid is accepted, then grounds shall exist for the Authority to terminate the agreement and claim damages from the successful bidders. You must not:

- Tell anyone else what your bid price is or will be, before the time limit for delivery of bids.
- Try to obtain any information about anyone else's bid or proposed bid before the time limit for delivery of bids.
- Make any arrangements with another organisation about whether or not they should bid, or about their or your bid price.

Offering an inducement of any kind in relation to obtaining this or any other award with the Department will disqualify your bid from being considered and may constitute a criminal offence.

Appendix 1: Technology Readiness Levels

Technology readiness levels are an indication of the maturity stage of development of a technology on its way to being developed for an application or product. The **Table 7** below defines TRLs 1 to 9.

Table 7 - Technology Readiness Levels

TRL 1 – Basic Research	Scientific research begins to be translated into applied research and development.
TRL 2 – Applied Research	Basic physical principles are observed, practical applications of those characteristics can be 'invented' or identified. At this level, the application is still speculative: there is not experimental proof or detailed analysis to support the conjecture.
TRL 3 – Critical Function or Proof of Concept Established	Active research and development is initiated. This includes analytical and laboratory studies to physically validate analytical predictions of separate elements of the technology. Examples include components that are not yet integrated or representative.
TRL 4 – Laboratory Testing/Validation of Component(s)/Process(es)	Basic technological components are integrated to establish that the pieces will work together.
TRL 5 – Development Prototypes	<p>The system, sub-system, components, or sub-scale units are integrated with reasonably realistic supporting elements so it can be tested in a simulated or representative environment.</p> <p>Critical cost assumptions are carefully investigated and the feasibility of the proposed manufacturing process is tested. A new manufacturing step may require a separate “product development” process for the manufacturing equipment. Prototype components and sub-systems are developed and improved to show that all the proposed technical components can provide the performance which will be required for future application (including: longevity, reliability, energy efficiency). Representative hardware and software components are tested in way that realistically simulates anticipated operating conditions or allows realistic predictions to be made. A relevant environment may be: laboratory test rigs with simulated use conditions, a controlled operational environment, or basic field tests. A test rig for new component technologies may be a version of the end-product. Intended functionality, size/form factor, and performance features are known at this stage. Successful development prototypes (components) become the basis for a demonstration prototype for full field tests.</p>
TRL 6 – Engineering or Demonstration Prototype	<p>Full-scale system in representative conditions - Engineering Prototype. Representative full-scale prototype system is tested in a relevant environment. Proof-of-application.</p> <p>Critical cost factors and new manufacturing capability are refined at this stage e.g. use of cost effective materials, demonstration that new components can be manufactured, demonstration of any new manufacturing steps or processes. Not all secondary interfaces or user features are (necessarily) available yet. Representative prototype is demonstrated in a relevant environment to prove engineering</p>

		<p>feasibility. The component/sub-system designs selected at previous stage are validated. Demonstration prototypes are typically fitted with a range of monitoring/measurement systems and operated in real-life systems and conditions with continual adjustment to confirm or optimise performance claims. Core functionality, size/form factor, and benefits of the proposed product should all be demonstrable but not all end-user features or interfaces are necessarily available at this stage. Some third part measurement validation or tests are usually best done at this stage (particularly to validate improved performance over other technologies or to confirm any necessary certification and approvals that need to be obtained).</p>
TRL 7 – Operational (Alpha Product)	Prototype	<p>Near or at planned operational system, requiring demonstration of an actual system prototype in an operational environment. Prototype for prolonged use at “tame” client or user site. All planned functions, interfaces integrated for monitored trials under the developer’s control. Alpha product prototypes are at or close to the proposed final product configuration which can be fully tested in an “in-house” trial in operational or client-like environments with integration to all systems or interfaces which will be experienced in-use. Alpha trials should validate in-use performance and also test the following: integration to all other relevant systems, features needed to support proposed installation and maintenance procedures, exposure to all other influences likely to be experienced in the “user-environment” etc.</p> <p>All the manufacturing steps will be tested at this stage and repeatable samples provided. Third party specialist tests would be done at this stage if not possible earlier. Prototypes may have minor re-designs following alpha tests but should not be subject to major re-designs if earlier stages have been completed properly. “In-house” means the developer runs and the trial and has access to the system(s) during the trial. Performance is not public but Alpha tests could be at “tame client” sites. Companies would not typically expect to sell prototypes at this stage.</p>
TRL 8 – Production (saleable Beta product)	Prototype	<p>Technology is proven to work - actual technology completed and qualified through test and demonstration.</p>
TRL 9 – System Proven and Ready for Full Commercial Deployment		<p>Actual application of technology is in its final form - technology proven through successful operations.</p>

Appendix 2: Eligible and Ineligible Costs

Applicants must complete the Stream 1 Project Cost Breakdown Form ([Annex 3A](#)) to provide the necessary cost information for the assessment process; further itemisation of costs and methods of calculation may be requested to support the application. The project costs quoted must reflect actual costs at a 'fair market value' and for this competition.

Timing: BEIS will only provide the funding to cover eligible costs incurred and defrayed in the period between the project start date specified in the Grant Funding Agreement, and the deadline specified in the Grant Funding Agreement for completion of the project.

Who can incur eligible costs: The definition of eligible costs includes the applicant's own costs, eligible costs incurred by consortium members and eligible costs incurred by companies sub-contracted to the applicant or consortium members as defined in the application or subsequent agreements between the successful applicant and BEIS.

Non-sterling costs: Costs must be denominated in GB pounds. If relevant, applicants should indicate where conversion has been made to GB pounds from other currencies and indicate the conversion rate and assumptions used. The invoices must be in GBP and payments will be made in GBP. Any currency fluctuations will be at the risk of the applicant and cannot be recovered as an eligible cost.

Decommissioning costs: Projects will have responsibility for decommissioning demonstration equipment/assets when the project has been completed if it is not feasible to continue to operate/develop the equipment. When applying, applicants need to include any decommissioning costs, at fair market value, in the total estimated costs for the demonstration project.

Sub-contract use: You will be expected to state and justify in your project application the amount of sub-contract funding (if any) within the expected spend of the project. You will be expected to explain the necessity for this spend as opposed to the addition of collaboration partners within the project proposal.

Overhead Rates: Overheads are additional indirectly incurred costs that are necessarily incurred by the applicant in undertaking the work. BEIS normally calculate overheads as a fixed percentage of all direct labour costs at 20% but will consider overhead rates in excess of 20% where a strong justification has been provided. The overhead rate is agreed with BEIS before the Grant Offer Letter is issued and cannot be changed during the work.

Staff Costs: BEIS would not normally expect to see contractors in key posts, e.g. CEO, FD, etc. included in applications. Exceptionally, where BEIS is willing to provide a grant which covers the cost of staff in key posts, the day rate attributed to each member of key staff within the project must be agreed with BEIS at the outset and cannot be varied without written agreement.

Eligible Costs

Eligible costs are defined as the following:

- Personnel costs: researchers, technicians and other supporting staff to the extent employed on the project.

- Costs of instruments and capital equipment to the extent and for the period used for the project. Where such instruments and equipment are not used for their full life for the project, only the depreciation costs corresponding to the life of the project. Please see Appendix 3: Residual Values for further guidance on calculating residual value.
- Costs of buildings and land, to the extent and for the duration period used for the project. With regard to buildings, only the depreciation costs corresponding to the life of the project, as calculated on the basis of generally accepted accounting principles are considered as eligible. For land, costs of commercial transfer or actually incurred capital costs are eligible.
- Costs of contractual research as well as costs of consultancy and equivalent services used exclusively for the project; and,
- Additional overheads and other operating expenses, including insurance costs for demonstration projects, costs of materials, supplies and similar products, incurred directly as a result of the project.

Ineligible Costs

Under no circumstances can costs for the following items be claimed:

- Contributions in kind
- Interest payments or service charge payments for finance leases
- Gifts
- Statutory fines, criminal fines or penalties civil penalties, damages or any associated legal costs
- Payments for works or activities which the grant recipient, or any member of their Partnership, has a statutory duty to undertake, or that are fully funded by other sources
- Bad debts to related parties
- Payments for unfair dismissal or other compensation
- Depreciation, amortisation or impairment of assets owned by the Grant Recipient (other than those Assets that are used for delivery of the Funded Activity)
- The acquisition or improvement of Assets by the Grant Recipient (unless the Grant is explicitly for capital use – this will be stipulated in the Grant Offer Letter)
- Liabilities incurred before the commencement of the Grant Funding Agreement unless agreed in writing by the Authority
- Costs associated with securing intellectual property arising from or associated with this project.

Further Guidance on Eligible Costs

Please note that residual values of capital items should be considered, so that the eligible cost is only the use of the asset for the purposes of the demonstration (i.e. the depreciation). The size

of the residual value at the end of the demonstrator will be dependent on the maturity (TRL) of the capital item. For example, for mature assets (e.g. solar PV), the eligible cost is only the depreciation costs for the duration of the project. Fully bespoke R&D assets may only have a value for the duration of the project so may have no residual value afterwards. More detail on residual value estimates can be found in Appendix 3.

Eligible costs are those associated with the demonstration, not the commercial deployment of the project or the wider infrastructure on the industrial or pilot site.

The eligible costs are the engineering design and planning work covering the above scope of project and incurred by end of project in producing the final report. This will typically include resource costs such as consultancy or staff time. In some instances, applicants may also need equipment to test or derive results necessary to the study and these costs are also eligible provided the findings are disseminated and included in the report. Standard equipment cost claims should reflect only the usage period relevant to the study, for example, based on depreciation or rental costs. Costs for the subsequent construction/implementation of the project beyond the period of funded activities are not eligible.

Applicants must indicate when completing their bid whether their organisation is able to recover VAT on project costs. VAT that you are able to recover from HM Revenue and Customs is not an eligible cost and cannot be claimed. Non-recoverable VAT is an eligible cost and can be included in the project costs in the Project Cost Breakdown Form. Grants are outside the scope of VAT and so non-recoverable VAT should be added into the 'excluding VAT' line on the invoice. Please include all eligible costs associated with the project. The total funding requested should not exceed the maximum allowable amount per project.

BEIS will only provide the grant to cover eligible costs incurred and defrayed in the period between acceptance of the BEIS grant and the deadline specified in the grant offer letter for completion of the project. The costs supplied by the applicant will be the costs on which your application is assessed. If an application is successful, and the project costs subsequently increase, the applicant will need to cover the increase in costs. If the project costs transpire to be less than those of the project cost breakdown form, BEIS will only pay the actual costs incurred as evidenced by appropriate information (e.g. timesheets for labour costs and suppliers invoices for external costs).

Applicants should ensure that their cost estimates are as realistic and as accurate as possible, giving due cognisance to the forecast project start date given in this guidance document. Any assumptions applicants make for the effects of inflation in respect of materials or capital expenditure items shall be clearly stated and justified in their responses. Where such inflation allowances are made, these should be itemised in the cost breakdown form (example in Figure 33). Where such cost inflation effects are estimated and accounted for, the total cost of the project shall be deemed by BEIS to be a "not to exceed cost", and the total sum paid by BEIS for the grant may be less than this amount in accordance with the previous paragraph. This methodology for price inflation cannot be applied to the following cost categories:

- i. labour and overheads;

- ii. sub-contract;
- iii. travel and subsistence; or
- iv. other costs.

Figure 33 - Example for representation of Inflation Allowances in the Cost Breakdown Form

	Capital equipment item	Capital equipment description, explanation of use within the project and justification of cost	New purchase or existing item	Net Price Value of item at project start or purchase price
1	Capital Item X	X is used to manufacture a turbine blade. Spec XXX, supplier quote provided in Supporting information document	New Purchase	£10,000.00
2	Capital Item X price inflation	Capital item X price inflation forecast between indicative quote Apr 23 and order placement in October 23 - 5% over 6 months. Based on YY source and supplier estimate in supporting information document	New Purchase	£500.00

Other Funding and Support

Other public funding: Projects receiving other public funds (whether received from BEIS or any other UK or non-UK public funding) may still apply to this competition. However, all forms of public funding will count towards the public funding limits and grant intensities set for the competition. For example, if a large organisation is eligible for 40% grant funding, the total public funding from all sources cannot exceed 40% of the eligible project cost. If the other funding is required for this project to progress, funding must be confirmed at the point of the Stream 1 application, and there must be no overlap in the scope of the costs covered. If considering the use of other public funds within their projects, applicants are further advised to consult the specific rules associated with the receipt of that funding.

Appendix 3: Residual Values

Capital equipment costs are eligible for funding, but only those which are essential for the demonstration. The eligible capital cost excludes the value of assets at the end of the demonstration (i.e. the residual value). Applicants are asked to include in the **Project cost breakdown form** the capital costs at purchase and the residual value of the capital items at the end of the demonstration. The eligible cost is the difference between the purchase capital cost and residual value (for items which are used solely for the funded activities during the funding duration i.e. 100% utilisation):

Eligible capital cost = Purchase cost – residual value at end of demonstration

This section provides basic guidance on our expectations around residual value.

Asset Classes

For the purposes of this competition we can divide capital assets into three classes, which can be treated differently:

1. **Mature assets:** Fully mature with functioning market (e.g. solar farm). The eligible cost is only the depreciation costs for the duration of the project i.e. excluding the residual value at the end of the demonstration. The residual value should be calculated using standard accounting practices for depreciation, such as the reducing balance or straight line depreciation methods, with the key assumptions and the lifetime of the asset clearly stated and justified.
2. **Developing assets:** Assets without a mature market but with a potentially significant residual value. These may have a market developing (and therefore resale value), or may have a value in their continued use on the site of the demonstrator (value in use). For example, part of a radar system. A fair residual value for such assets should be calculated using the principles in this Appendix.
3. **Fully bespoke R&D assets** which only have value for the duration of the innovation project and have no residual value afterwards. An example of this asset class is a turbine blade used for trials at pilot scale for a specific application, but which cannot be used for commercial operation. The eligible cost of these assets is 100% less the scrap value (funded at the appropriate grant intensity).

Developing assets

With regards to the '**Developing assets**' above, if standard depreciation is not considered a fair and appropriate method, applicants could alternatively consider the:

- A. **Resale value** – value which could be achieved in selling the asset to another party at the end of the demonstration.
- B. **Value in Use** – the value of the asset for the current site or owner, for example through revenue generation in commercial operation.
- C. **Scrap value** – for example the salvage value of the equipment when it is disposed of as scrap material/components after its useful life.

For these developing assets, applicants should use the highest of the above three values as the residual value, except where continued use in the proposed industrial application is planned. **If you plan to use the asset for the duration of its lifetime (>3 years) in the proposed industrial application or for the proposed end-to-end research** the scrap value can be used as the residual value. The applicant must provide evidence that the asset is being used for the agreed purpose and time period, including after the end of the demonstration funding period.

Application, assessment and delivery

Applicants are expected to select a reasonable approach for their assets and project and justify this in the application and **Project cost breakdown form ([Annex 3A](#))** The BEIS and external assessors will use their expert knowledge to determine if the residual value provided is appropriate. If the residual value provided is deemed too low, the project is likely to score lower on value for money. BEIS may request clarification on residual values during the due diligence period.

At the end of the demonstrator, prior to project sign off, BEIS will review the residual value of the largest assets and if there is a material change in the residual value (e.g. due to market conditions or the outcome of the demonstrator), this may be adjusted and the final invoice amended (up to the maximum project grant limit agreed). For example, if a sale price has been agreed for an asset that is greater than the anticipated residual value, this will be reflected.

Applicants are reminded that BEIS reserves the right to review the status of the project and assets 2 years after the end of the demonstrator to ensure the agreed funding, residual value and asset use remains valid and as agreed. If there is found to be a material change in the agreement or value, BEIS reserves the right to claw back any grant overpaid.

Appendix 4: Windfarm Mitigation for UK Air Defence: Phase 3 (Stream 1) Clarifications

14/03/2023

Programme NJORD

Q1. How is this competition connected with Programme NJORD?

A1. Programme NJORD and the DASA Windfarm Mitigation innovation programme are running in parallel and are both part of the Joint Air Defence and Offshore Wind Task Force activities. The DASA innovation competition is supporting projects at lower technology readiness levels (TRLs) and is aiming to inform the future system of systems to enable the long-term co-existence. However, some of the most promising technologies could potentially inform the later deployments in the NJORD programme. For clarity, there is no 'ticket' into NJORD from this competition, and if a supplier was not successful at this competition they would still be able to input to NJORD at a later date if they wanted.

Communications

Q2. Will the slides and videos from events be available to view after the event?

A2. Yes. Links to presentations / recordings are made available on gov.uk pages.

27th January Pre-Launch Webinar (<https://youtu.be/W8OgKRE0qhc>)

6th March 2023 Stakeholder Engagement Event ([see on this page](#))

Technical

Q3. Which radar band is of more interest for this competition?

A3. Both S-band and L-band are used for air search. Primarily the 3GHz region is of interest because of future expectations but as per Section 3.2 of the competition document, solutions in the L band are also of interest. There is not a penalty for not covering the L band. Each proposal will be reviewed on its output

Q4. Is the target just looking at RCS reduction, and how much RCS reduction might be required?

A4. We do not want to say this is the only target as it is still uncertain whether a single approach or a system of systems will be required. For RCS reduction mitigation approaches it is unlikely that there would be interest in < 10dB reduction. RCS reductions nearer 30dB would be of more interest.

Q5. Are you looking at performance across the whole surface of the turbine blade?

A5. It is the total RCS of the blade that is important for RCS reduction techniques. If the required level is achieved by technologies applied to only a part of the blade then that is fine.

Q6. Would a floating platform outside of a windfarm be within scope for this competition?

A6. There are no restrictions or potential ideas. If you believe you have a solution then we would like to review it.

Q7. Is a demonstration site outside the UK allowed?

A7. As stated in Section 7.1 on page 11 of the competition guidance in eligibility criterion 10: 'The lead applicant or project co-ordinator for the funded activities must be registered with Companies House. Projects can work with international partners but should aim to maximise the benefit to the UK. The physical demonstrations must be located in the UK.'

Stream 2: Analytical Evaluation Study, Future Competition (See Section 2.3.1 of Competition Guidance)

Q8. Working with a collaboration model developer was mentioned in one of the presentation slides. Can you provide further details?

A8. In Phase 3 it is planned to have a Stream 2 competition asking for a computer model which can take data from disparate technologies and make representative scenarios to compare them. This cannot be launched until the winners of Stream 1 are known. The purpose will be to allow MOD to compare technologies to aid future decision making about mitigating solutions.

Q9. Will the model compare value for money as a parameter?

A9. First and foremost, the model is intended to compare the technical performance of the disparate mitigating technologies and present results in a way that will allow a better comparison between the different approaches. The value for money/cost will not be included in the technical model but requirements for Stream 2 may include development of a separate cost model to facilitate decision making. This will be clarified in the Stream 2 scope document.

Q10. What approaches will the comparison model be used to look at?

A10. All of the options successful under Phase 1 will be looked at. The aim is to identify what has the potential to work best as a solution and this may be a combination of technologies.

Q11. Could we provide data for the Stream 2 competition even if we were not successful in Stream 1?

A11. No. The Stream 2 work will only use data provided by the winner of Stream 2 and the successful proposals from Stream 1.

It is possible that after completion of the Stream 2 projects the model will be applied more widely but not as part of this competition.

Q12. Please clarify how IPR would be handled in Stream 2?

A12. As per Section 2.3.2 of the competition guidance, Stream 1 winners will be required to cooperate with the winner of Stream 2 competition, which will include provision of ad hoc technical and troubleshooting support. The information will be shared between Stream 2 and individual Stream 1 projects in confidence. The Stream 2 supplier will be required to interact with all the suppliers in Stream 1 to define and model their proposals in a way that suitably respects the intellectual property of all parties. For avoidance of doubt, individual Stream 1 project's information required for the model and shared with Stream 2 winner, will not be shared with other Stream 1 projects. The Stream 2 winner will only be allowed to use the information for the purposes of the Stream 2 work.

No information from Phases 1 or 2 will be given to suppliers working on Phase 3.

Q13. Can we bid for the Stream 2 competition if we are successful in Stream 1?

A13. Yes. And as per Section 2.3.2.2. of the competition guidance, suppliers who wish to bid into both streams will need to ensure that suitable arrangements and ethics walls are in place to prevent commercially sensitive information from this modelling exercise being passed to the Stream 1 competition.

Q14. Is the stream 2 competition open to all industry or only those who have been involved with the competition so far?

A14. The Stream 2 competition will be open to all industry.

Process

Q15. Why is there is a request for matched funding for Phase 3?

A15. Phase 1 and 2 were at a lower Technology Readiness Level (TRL) and therefore fully funded. Phase 3 is at a higher TRL, therefore the confidence in the technology should be higher and match-funding has been requested to extract maximum value for money.

Q16. Can the trials be approached in a stage-gate manner?

A16. Yes. We would look for a project plan that has clear milestones and stage gates.

Q17. Can we have a proposal that considers two different technical options?

A17. Each proposal will be reviewed on its own merit. If both technical options are within scope and the proposal is within cost limits then that is acceptable. If you wish to have an either / or option then you would need to make two separate submissions. There can be no interdependence between multiple submissions, i.e. Proposal 2 must not be dependent upon the completion of Proposal 1.

Q18. Why is the available funding for materials so high?

A18. We wish to explore all possible solutions and avoid 'putting all eggs in one basket'. It is possible that there will be a multi-strand solution to the problem. Funding limits have been designed to reflect the anticipated costs and to enable delivery of an ambitious scope outlined in the competition guidance. However, it is not expected that all applications will request the maximum amount available. All proposals have to demonstrate the value for money and will be assessed accordingly.

Business/Regulatory

Q19. Is there any preference as to the lead organisation? Is it better if this were a large organisation?

A19. There is no preference about the type of lead organisation.

Q20. Is there any guidance on who we should partner with?

A20. We do not offer any guidance about who you should partner with, but recommend that you consider this, and take part in the collaboration survey available here [\[https://www.smartsurvey.co.uk/s/J3Y3MY\]](https://www.smartsurvey.co.uk/s/J3Y3MY)

Q21. Is it a concern that as there is no current legislation governing use of stealthy materials on windfarms, that all work undertaken throughout this competition may be wasted?

A21. Currently, there is no sufficient evidence to warrant legislation mandating use of stealthy materials on windfarms. One of the aims of this innovation programme is to build an evidence base to support the decision making on future development and policy decisions. Successful demonstration of stealthy materials may be an enabler. There is also a potential that use of stealthy materials may be of interest to onshore windfarms dealing with Air Traffic Control sooner than the Air Defence.

Q22. Can we use an existing operational system's performance as our demonstration?

A22. The demonstration requirements are set out in section 3.4.4 of the competition document. An existing solution that requires no innovation would not be in scope.

Q23. Is it necessary for workers to have security clearance to work on a project?

A23. No. Security vetting may be undertaken as part of a due diligence process but full security clearance of workers is not required.

Q24. Are there any security requirements related to working on windfarm infrastructure?

A24. You would have to identify with the windfarm operator any restrictions that may apply. It should be noted that transmission licenses may be required for radar operation.

Q25. Is it possible for any physical structure/platform used to host a sensor for the purposes of the demonstration in Phase 3 to have a shared function outside of the competition scope?

A25. For this competition we are looking to identify potential technologies that may have applications in the future. It is not necessary for this competition to have independent physical structures/platforms but that may be a consideration for any future deployment.

Q26. The T&Cs mention that the contract will be with a single party. Are we free to decide if work is undertaken as part of a collaboration or under sub-contracting?

A26. As per section 5.4 of the competition guidance, the lead organisation must sign up to the terms and conditions outlined within the Stream 1 Grant Funding Agreement (Annex 1A). Lead organisations are free to decide on the contractual relationship with potential partners. If the project is being delivered by a consortium, the project partners will need to complete a consortium agreement. Agreement template is not mandated, but section 5.4 of the guidance provides a non-exhaustive list of what is expected to be included.

Q27. The T&Cs are from the Department for Energy Security and Net Zero, but this is a DASA competition - are there any other T&Cs that will additionally apply at a later date?

A27. No, only the stated T&Cs will apply. DASA T&Cs do not apply to this competition.

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