Department for
Business, Energy
& Industrial Strategy

Industrial Energy Transformation Fund - Phase 2 Guidance

January 2022

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1.0 Introduction

1.1 Objectives of the fund

The Industrial Energy Transformation Fund (IETF) supports industrial sites with high energy use to transition to a low carbon future. The fund targets existing industrial processes, helping industry to:

- cut energy bills by investing in more efficient technologies; and
- reduce emissions by bringing down the costs and risks associated with investing in deep decarbonisation technologies.

Funding is allocated through a competitive process aimed at supporting the highest quality and most transformational bids. The fund is open to a broad range of industrial sectors and will support applicants based in England, Wales, and Northern Ireland, both within and outside of industrial clusters. For further information on the policy rationale behind the Fund's design please read the Industrial Energy Transformation Fund Phase 2 Policy Statement.

The Department for Business, Energy and Industrial Strategy (BEIS) manages the IETF for England, Wales and Northern Ireland, with £289 million to invest by 2025. This funding will be allocated through consecutive application windows split into two phases. This guidance document relates to Phase 2 of the IETF, and specifically the second application window of Phase 2 (Spring 2022).

For further information on the policy rationale behind the Fund's design please read the Industrial Energy Transformation Fund Phase 2 Policy Statement. If your site is based in Scotland, you can apply for the Scottish Industrial Energy Transformation Fund (SIETF). Contact IETF@gov.scot for more information.

1.2 Competition Scope and Structure

Funding will be allocated across three competition strands:

- Studies: feasibility and engineering studies to enable businesses to investigate identified energy efficiency and decarbonisation projects prior to making an investment decision
- Energy Efficiency: deployment of technologies to reduce industrial energy consumption
- Deep Decarbonisation: deployment of technologies to achieve industrial emissions savings

Businesses are invited to bid into any one or more strands, provided their proposal or proposals is/are in scope of the competition's objectives and meets/meet the eligibility criteria for each strand. Proposals must aim to improve the performance, emissions, and

environmental outcomes of the industrial process beyond standards currently required by relevant UK and international law.

Businesses should only apply if the project or study could not go ahead without government support. You must include a justification for the costs claimed in your application. It is your responsibility to demonstrate that your stated eligible costs are necessary in order to achieve the objectives of the competition strand you apply for.

This guidance sets out in more detail the eligibility and assessment criteria for each strand. It also describes the processes for the application, assessment and award stages of the competition.

1.3 Competition dates

Phase 2 Spring 2022 competition will:

- open for applications 11am (GMT) on 31st January 2022
- close to applications at 3pm (GMT) on 29th April 2022
- Feasibility studies must start no later than 1st May 2023 and finish no later than 1st May 2024;
- Engineering studies must start no later than 1st May 2023 and finish no later than 31st March 2025;
- Energy Efficiency and Deep Decarbonisation Deployment Projects must start no later than 1st May 2023 and finish no later than 31st March 2025.

You will be informed whether you have been successful or not after the initial assessment in Autumn 2022. Success at this stage does not guarantee funding. Any funding will remain subject to completion of due diligence to BEIS' satisfaction and agreement to our proposed Grant Funding Agreement.

We expect successful applicants to start and complete their proposal as defined in the application by the dates set out above. This is to ensure that funding is spent within the lifetime of the IETF and, in the case of studies, to help create a pipeline of projects which may themselves be candidates for deployment applications in later competition windows. At the end of your project (project completion) you must have completed the study, or have installed and begun to operate (or be ready to operate) the energy efficiency or decarbonisation technology.

1.4 Competition Budget

The budget for the Phase 2 Spring 2022 competition is up to £60m.

The remainder of the Phase 2 funding, £100m, will be allocated across two further competition windows which are currently anticipated to open in May 2022, and October 2022, enabling industry to apply in line with internal investment and replacement cycles.

We have anticipated budgets for each window, but these remain flexible and the IETF is intended to evolve over its lifetime. BEIS reserves the right at its absolute discretion to increase or decrease the size of the funding rounds at any time and for any reason. The launch of this round of IETF funding does not guarantee the availability of any funding now or in the future. All IETF funding must be spent by March 2025 so we encourage applicants with large or lengthy projects to apply as early as possible in order to fit within these time frames.

Table 1: Competition Timeframes

Window	Likely Window opens	Likely Window closes	Likely initial Funding Decision	Approximate Budget Allocation
Phase 2: Spring 2022	January 2022	April 2022	September/October 2022	£30m for DD £15m for EE £15m for studies
Phase 2: Summer 2022	May 2022	September 2022	February/ March 2023	£25m for DD £15m for EE £15m for studies
Phase 2: Autumn 2022	October 2022	January 2023	June/July 2023	£20m for DD £10m for EE £15m for studies

1.5 The Three Competition Strands

The IETF is made up of three competition strands. You will need to decide which competition strand or strands you are applying to. The information below sets out the scope of each strand to help inform this decision.

You are also advised to read the guidance on technological eligibility in Annex A, located at the end of this document. The technology rules apply for both studies and deployment projects, unless stated otherwise.

1.6 Studies

You can apply for grant funding towards the costs of feasibility and/or engineering studies. Studies should facilitate an investment decision in a specific technological solution. Studies should not be carried out as part of an options analysis, as a single technology should already have been identified prior to the study.

At the end of your study, you must have completed a report that meets the specification for a feasibility or engineering study (see below). For some specific technologies we will require additional areas to be considered within the scope of the study. The aim of the studies competition is to help build a pipeline of future deployment projects, however success in this competition does not guarantee that an applicant will receive funding for deployment in future rounds.

1.6.1 Feasibility studies

A feasibility study will investigate the technical, economic, and operational impacts of deploying a technology solution within the applicant's existing industrial process.

If you are carrying out a feasibility study, it must:

- investigate a defined technology solution that meets the eligibility criteria of the fund. Technologies must improve the energy efficiency or reduce the greenhouse gas emissions of an industrial process, or achieve both.
- investigate the costs and benefits of the technology, and how it would perform compared to the existing industrial process technology. This should consider any potential impacts on operability, environmental benefits and scheduling of the plant.
- establish whether or not the potential technology is technically and commercially viable at the lead applicant's site.
- enable the lead applicant to reach a conclusion on whether or not further development of the proposed technology solution is cost-effective and could eventually be deployed permanently.
- for deep decarbonisation technologies, studies should particularly consider whether the technology is sufficiently well-developed and identify any specific barriers to deployment within the industrial process.

1.6.2 Engineering studies

An engineering study is a detailed project plan that identifies specific technical and operational requirements, equivalent to a Front-End Engineering and Design (FEED) study. The final report must provide sufficient detail to enable your business to arrive at an investment decision. By the end of the project (i.e. once the study has been completed), key technical issues identified and project scheduling work should be complete, such that the business knows whether the project would be ready to be delivered on receipt of internal approval.

We expect your engineering study to show appropriate consideration of:

- technical approach including performance and commissioning and acquisition of materials, expertise etc.
- plan for how and when the intervention would be deployed and how any disruption to existing processes would be managed
- carbon reduction by volume, cost and/ or analysis of other benefits
- health and safety, and permitting
- planning and consent
- environmental impacts
- economic analysis and forecasting
- project delivery requirements and scheduling including identified contractors
- project risks and risk management strategy

1.7 Energy Efficiency Deployment Projects

This strand will support onsite deployment of technologies that will improve the energy efficiency of an industrial process. Businesses can apply for grant funding towards the costs of installing or retrofitting equipment on site. The IETF does not provide ongoing support for operational costs if raised by installation of the equipment.

Eligible technologies must have been proven to work through successful operation and/or be qualified through test and demonstration (equivalent to Technology Readiness (TRL) 8 and above, see TRL section for further details). The intention is to support the commercial roll out and permanent installation of technologies at industrial sites, rather than general research, development, and testing of a technology solution. There is no requirement for a feasibility or engineering study to have been carried out prior to submitting a deployment application, although a previous study may help to strengthen an application.

The applicant will need to describe the energy saving potential of the technology or technologies considered. Energy savings (MWh) must be measured and take place at site level. Savings should be demonstrated by a total fall in the energy consumed in the existing industrial process, or (if there is a resulting change in production) the energy saving per unit produced. Energy savings should be the primary motivation for the project, any associated emissions savings will also be considered as part of your application.

1.8 Deep Decarbonisation Deployment Projects

This strand will support onsite deployment of technologies that will reduce emissions generated by an industrial process. Businesses can apply for grant funding towards the costs

of installing or retrofitting equipment on site. The IETF does not provide ongoing support for operational costs if raised by installation of the equipment.

To be eligible, technologies must have been developed at least as far as prototype stage at the scale of the plant. The intention is to support the commercial roll out and permanent installation of technologies at industrial sites, rather than general research, development, and testing of a technology solution. However, we recognise that decarbonisation technologies are often at an earlier stage of technological maturity or commercial development than energy efficiency technologies, and as such we will accept applications from TRL 7 in addition to those at TRL 8 and 9. There is no requirement for a feasibility or engineering study to have been carried out prior to submitting a deployment application, although such a study may help to strengthen the application.

The applicant will need to describe the expected greenhouse gas emissions savings from installing the technology or technologies. These could be demonstrated by a change to a lower carbon fuel or by the direct abatement of onsite emissions, for example through carbon capture. A reduction in your existing fuel use, without a fuel switch, would not be classed as deep decarbonisation project but may be in scope for the energy efficiency strand of the competition.

Emissions savings (tCO_2e) must be measured and take place at site level. Emissions savings should be the primary motivation for the project. These technologies do not necessarily have to have an associated energy efficiency saving, but in some cases, this may form part of the rationale for undertaking the project.

2.0 Pre-application

2.1 Before you start an application

You should read all the guidance provided before starting an application.

To start an application, you will need to create an account via the IETF competition webpage. This will mean that you can save your application at any time, and log back in to complete or update different sections. The application form will go live on the 31st January 2022.

2.2 Checking your proposal is eligible

We encourage you to check that your proposal is eligible by contacting BEIS as early as possible, before writing the application. To get in touch please email ietf@beis.gov.uk and include “Eligibility screening” in your email title. You will be asked to share details of your project to help BEIS give an initial view. We will then be in touch to provide guidance on eligibility and arrange for a further discussion if necessary.

Commercially sensitive data that you share via the enquiries service will be stored securely and will be used for the purposes of providing you with advice. We may also use your feedback to understand the project pipeline and to evaluate the performance of the IETF, ensuring all identifying details are removed.

2.3 Applying with multiple proposals

Typically, a project proposal or study proposal should be focused on **one technology solution**, **at one site**, targeting an existing industrial process owned by the lead applicant. The definition of one proposal can also, in Phase 2 of the IETF, include the following scenarios:

- If a case can be made for a package of mutually beneficial investments working towards the same end result. For example, a site considering electrifying an existing process may invest in measures to upgrade on-site transformers, replace an existing piece of equipment (such as a dryer or furnace) and install new metering and control systems. This could all be considered as a package of complementary, and interdependent investments enabling an electrification project;
- Where a single study considers how a single, defined technology solution might be rolled out across multiple of the lead applicant's sites (up to a maximum of five).

In these scenarios, and in any case where you are only bidding for one project or study, you will fill out one set of questions which covers all proposals within your application. Your responses will be assessed as an individual proposal. This means that weaker elements within the application could result in the whole application being unsuccessful.

Other than in the scenarios outlined above, investments which relate to different parts of the industrial process, or which span multiple sites, are considered individually as separate proposals.

Aggregated Proposals

If you have more than one proposal, you may want to consider whether to apply for them separately or as part of an 'aggregated' application. This means that you will only need to fill out some parts of the application once, for example business details. The other benefit is that you can combine smaller deployment proposals together to meet the minimum grant threshold. Since the minimum thresholds for studies are set at low values, we require individual studies to exceed the minimum.

To streamline the application process, you will be given the opportunity to aggregate up to five projects or studies (proposals) into one application. This is an option, rather than a requirement so applicants may choose to submit multiple applications or just one application. It is at your discretion to decide what would be the best approach for your business. You will be expected to take forward all proposals which are successful at award stage.

There are some restrictions on when aggregation is feasible, designed to ensure that the application, assessment, due diligence and project set up processes are as smooth as

possible. Proposals located on the same site, or located across multiple sites, may be aggregated into one application provided that an application covers these points:

- The proposals have the same lead applicant.
- The proposals take place on eligible sites owned by the lead applicant.
- The proposals are undertaken with the same project team (if the lead applicant chooses to work with a project team)
- The scope of the proposal meets the criteria of the strand of the competition you are applying for, such that:
    - Proposals considering energy efficiency and deep decarbonisation technologies cannot be aggregated together.
    - Studies and deployment projects cannot be aggregated together.
    - Feasibility and engineering studies cannot be aggregated together.
- The minimum eligible cost thresholds for feasibility and FEED studies of £30,000 and £50,000 respectively will apply to individual studies within an aggregated application.
- For applications aggregating deployment proposals, the grant funding amount for each deployment proposal may be combined to reach the minimum grant funding threshold of £100,000.
- There is no upper limit on the value of an aggregated application, provided that each individual proposal does not exceed the maximum grant funding threshold for the competition strand you are applying to.

Where investments are distinct in their technological solution or purpose, they should be entered as separate proposals within the aggregated application.

Applications which include multiple proposals must give detailed answers and justification for each one in the relevant sections, as these will be assessed independently. An unsuccessful proposal within an aggregated application will not automatically result in the failing of the remaining proposals so long as these proposals each meet the relevant eligibility criteria, pass the initial assessment stage and, in the case of deployment projects, the combined grant amount requested is still more than the minimum threshold amount of £100,000. Projects which are successful at initial assessment stage will undergo due diligence during which the ability of the lead applicant to support all projects will be assessed. If it is deemed that not all projects in an aggregated application can be supported by the lead applicant, some or all may be rejected.

2.4 Previous Applications

We will allow previously submitted proposals to apply to subsequent competition rounds (this includes proposals originally applied for unsuccessfully in the Summer 2020 and Spring 2021 rounds of Phase 1, and the Autumn 2021 window of Phase 2). Feedback will be provided on all applications. You may improve your chance of success if you make changes to your original

application based on the assessor feedback you received. There is, however, no guarantee that your application will be successful; each application will be assessed on its own merit. Applicants should be aware that there have been changes to competition rules between Phase 1 and Phase 2, and there may be further refinements between future competition windows. For each application you submit, you must make sure that your business, project team (where applicable) and your project are eligible and the questions are answered in full.

2.5 The Application Process

Before applying, please look at Figure 1, which shows the process of the application and what happens after application. Please note, any funding will remain subject to successful completion of the relevant stages set out below and agreement to our proposed Grant Funding Agreement.

Check whether this is suitable for your project.

Once you have created an account and chosen the competition strand into which you wish to apply, you can begin to create an application.

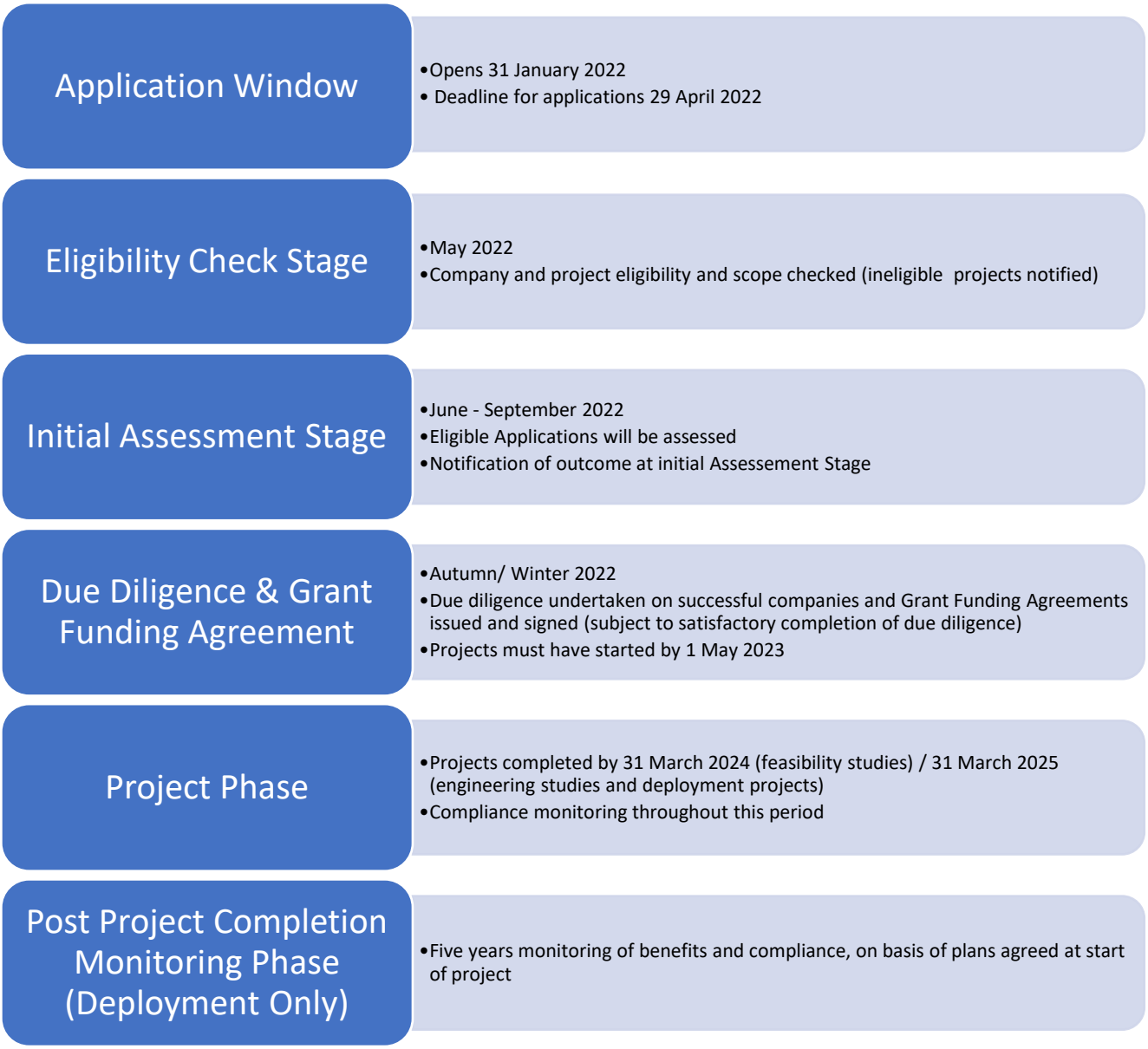
The lead applicant needs to create an account, set up an application and submit their proposal. You can invite others to collaborate on an application by inviting them to set up an account and collaborate on a specific proposal. You do this by logging into the application form, where you have an option to ‘Invite collaborators’ and ‘Manage Users’. This can be used to invite others in the lead applicant’s organisation or projects partner’s team members. Please use these tools to manage who has access to the application before you (as the lead applicant) submit. There is additional guidance in the online form to support the use of these functions.

You can save your work at any stage and log in to continue an application, provided it is before the closing date of the application window. Please use the ‘Check and Submit’ function at the end of the ‘Application details’ page to show you which sections require further input before you are allowed to submit.

Once you have submitted there will be an onscreen confirmation that your proposal has been received.

Applicants are encouraged to contact the IETF support service at ietf@beis.gov.uk if any help or clarification is needed as you work on your application.

Figure 1: The Process



3.0 Eligibility

You will first be asked to provide information that will help us to assess the eligibility of your proposal and check that it is in scope of the competition.

There are a range of criteria that your proposal must meet to be eligible for funding. An overview of these eligibility criteria is provided in Table 2.

Sections below broadly correspond with the application questions you will be asked. Please ensure you read each section.

Following submission of your application, your eligibility will be checked and you may be asked to provide further evidence. Applications which pass the eligibility checks will be put forward for assessment.

Table 2: Overview of eligibility criteria

Competition strand	Minimum threshold[1]	Maximum threshold	Aggregation	Typical maximum subsidy intensity Large/ Medium/ Small business	Further subsidy intensity uplifts[2]	Must start by	Must complete by
Feasibility Study	£30,000 total eligible cost per study	£7m total grant funding per study	Up to 5 studies may be aggregated within or across the lead applicant's sites.[3]	50% (L) 60% (M) 70% (S)	N/A	01/05/2023	01/05/2024
Engineering Study	£50k total eligible cost per study	£14m total grant funding per study	Up to 5 studies may be aggregated within or across the lead applicant's sites[3]	25% (L) 35% (M) 45% (S)	Uplifts available for knowledge sharing	01/05/2023	31/03/2025
Energy Efficiency Deployment	£100k total grant funding per application	£14m total grant funding per project	Up to 5 projects may be aggregated within or across the lead applicant's sites.	30% (L) 40% (M) 50% (S)	15% (A) 5% (C)	01/05/2023	31/03/2025
Decarbonisation Deployment	£100k total grant funding per application	£30m total grant funding per project	Up to 5 projects may be aggregated within or across the lead applicant's sites.	50% (L) 60% (M) 70% (S)	15% (A) 5% (C)	01/05/2023	31/03/2025

[1] Minimum thresholds for studies are related to eligible costs, whereas minimum thresholds for deployment projects, and maximum thresholds for both studies and deployment, are related to total grant funding.
[2] If your business is based in an area of lesser economic advantage you can claim a higher subsidy against the eligible costs of your proposal.
[3] Provided the technology solution is the same, a single study could cover up to 5 of the applicant's sites within its investigation.

3.1 Eligibility: Business Details

3.1.1 Lead Applicant

To lead an application your organisation must be a registered business in England, Wales or Northern Ireland. If successful, the lead applicant will be the signatory of the grant funding agreement with BEIS. BEIS will have a have a direct relationship with the Lead Applicant. BEIS will not have a legal relationship with, or pay money to, a third party. The lead applicant must:

- claim costs as part of the project or study
- use energy or produce direct emissions as a result of their own industrial processes (see below) at an existing site or sites
- be the end beneficiary of the study or deployed technology and owner of the industrial process.

We will ask you for your company registration number (e.g. your Companies House ID, where relevant), the registered address of your business in England, Wales or Northern Ireland and the full address of your headquarters (if different from your businesses' address).

All lead applicants will be asked for details of your main business activities, organisation size and how many people you employ.

As the lead applicant you will be responsible for creating your application, ensuring all parts of the application are completed including additional information required to be uploaded, and submitting the application before the deadline.

Please note that technology developers or other third parties are not eligible to apply as the lead organisation on behalf of an eligible site.

3.1.2 Industrial Processes

To be eligible as a lead applicant you must carry out an eligible industrial process at a site (or sites) which will be the focus of the application. Industrial processes refer to a set of economic activities as defined by the Standard Industrial Classification (SIC). Businesses registered on Companies House are allocated a 5 digit SIC code at the time of registering. If relevant, you will need to check your business SIC code to make sure you are eligible. For this competition the industrial process carried out by your business must fall into the following SIC codes:

Table 3: Eligible SIC codes

Eligible industrial processes	SIC codes
Mining and quarrying[4]	05101 through to 05200; 07100 through to 08990; and 09900
Manufacturing	10000 through to 33200
Recovery and recycling of materials	38320[5]
Data centre	63110

Where relevant, you will be asked to enter your business' 's registered SIC code in the application form.

3.1.3 Site

If you find that your registered SIC code does not reflect the industrial process carried out at the site of the proposed project, or if you do not have a Companies House record, you will be asked to provide further details to evidence your eligibility. An example would be a telecoms business with an ineligible SIC code (for example 61100) that owns a data centre with an eligible category of activity (SIC code 63110). In this case, you will also be asked to provide details of the SIC code which most closely matches the activity at the site that is the focus of the proposed project.

We will also ask for the address of the site(s) which will be the focus of the application. If you are filling out an aggregated project application, there will be an option to fill in more than one address.

The project or study must relate to an **existing industrial site**(s) **or existing data centre**(s) located in England, Wales or Northern Ireland. A site is defined as the postcode, or multiple directly adjoining postcodes at which the project takes place. You will be asked to confirm that the scope of the study or project is within the boundary of the lead applicant's site(s).

The competition is targeted at technologies that will reduce the onsite energy use or emissions generated by industrial processes or datacentres. In some cases, **Combined Heat and Power** (CHP) equipment integral to the process may be owned by a separate entity or may not be co-located on the immediate site. Applications investigating eligible fuel switches for CHP plants will be considered in scope provided that at least 70% of both the heat output and electricity output produced by the CHP plant is used for an eligible process by the lead applicant or project partners. The lead applicant must in this case be an eligible end-user, and the CHP operator must be a collaborating partner on the project.

[4] This excludes activities related to the extraction of gas or petroleum.
[5] Activities associated with producing energy from waste are not eligible. Further details are provided in the technical eligibility section.

3.1.4 Project team

Lead applicants can collaborate with other organisations provided the project partners claiming grant funding meet the criteria below. To collaborate with the lead your organisation must:

- be a business of any size, a research organisation, a research and technology organisation, an academic institution, charity or a public sector organisation. You must read the guidance to find out which definition your organisation falls into
- be registered in England, Wales or Northern Ireland
- carry out its project work in relation to the lead applicant's site located in England, Wales or Northern Ireland

If the lead is collaborating with project partners, then the costs relating to the lead and project partners must be included in the application. For all applications the lead applicant must claim a share of the grant funding. BEIS will only have a legal relationship with, or pay money to, the lead applicant. Each partner organisation must be invited into the online application form by the lead applicant to collaborate on the project. You will receive an email invitation from the online application form and will need to accept the invitation and create an account, or sign in to an existing account.

Your project can include project partners that do not receive any of this competition's funding, for example businesses registered outside of the UK. You should only add project partner details for organisations who are acting economically in the project.

If you collaborate with project partners to deliver the project you will be required to sign a collaboration agreement with your project partners, if you are successful. This will need to be in place before you can sign your Grant Funding Agreement with BEIS. See Section 6.7.

3.1.5 Subcontractors

You may work with subcontractors to carry out your project or study, and they must be selected through your usual procurement process. You will be asked to provide details of any subcontractor costs in your application and an explanation as to why they are required.

We expect all subcontractor costs to be justified and appropriate to the total eligible project costs. There are no restrictions on the location of subcontractors, which can be based outside England, Wales or Northern Ireland.

3.2 Eligibility: Project Description

We will ask you to provide a description of your proposed project. You should include information that clearly shows how your project aligns to the IETF eligibility criteria. Your answer should outline the scope of the project or study and technology solution, how it aligns with the aims of the IETF and any other information you think relevant for BEIS and its assessors to understand your proposal. You will be asked to describe the intended outcome of

the technology solution. Deployment projects will also need to provide information about any metering equipment already in place or that you need to install as part of the project, to provide data for longer term compliance and benefits monitoring. (See Metering section below).

3.3 Eligibility: Technology Scope

This section covers:

- Summary of technologies within scope
- Technology Readiness Levels
- Activities out of scope

3.3.1 Summary of technologies within scope

The IETF is technology neutral to allow applicants to explore the most suitable technology for your site and industrial process. Applications should demonstrate why the chosen technology solution is appropriate, the savings it will achieve, and check that it meets the standards and eligibility criteria specified in this guidance, detailed eligibility criteria by technology type are included at Annex A.

Applicants in all competition strands are required to define your proposal as either achieving an energy efficiency or decarbonisation outcome. At deployment stage this will impact on the questions you are asked and how your proposal is assessed. We will consider:

- Energy efficiency proposals which reduce the energy consumed by industrial processes at site level, attributing benefits to both the bill savings (we anticipate most efficiency projects will have a positive payback) and any associated emissions savings.
- Decarbonisation proposals which reduce the emissions produced by industrial processes at site level. While in some cases there may be an associated energy saving this is not the key driver for the proposal and in many cases energy bills may in fact increase.

Annex A classes the types of technologies that are eligible as energy efficiency and decarbonisation solutions. We recognise that some decarbonisation technology solutions may achieve both outcomes (for example the installation of a heat pump to displace a fossil fuel heat source leads to both an energy saving and an emission saving at site level). In this case it is for the applicant to decide on what basis the strongest case is made for your project, as well as noting that this will impact on the eligibility and assessment criteria and funding rules (see below) that will apply.

Technologies must improve the energy efficiency or decarbonisation of the industrial process beyond existing standards currently required by relevant UK and international law in order to be eligible. The relevant laws and standards are subject to the location of the project. If the organisation or enterprise is located in England or Wales, businesses must comply with UK

laws and standards. If the organisation or enterprise is located in Northern Ireland, subsidies provided in this competition are subject to standards set by the European Union. It is the applicant's responsibility to ensure you adhere to the relevant minimum standards prior to application.

3.3.2 Technology Readiness Levels

The IETF aims to support the commercial roll out and permanent installation of technologies at industrial sites. We use Technology Readiness Levels (TRLs) to define the range of technologies that correspond with real world demonstration, and are therefore in scope for funding.

Figure 2 describes the stages of technological readiness. If your proposal falls below the eligible ranges then it may be more closely aligned with innovation, research, and development competitions such as those offered through the BEIS Net Zero Innovation Portfolio.

We expect that TRL levels will change for some technologies over the lifetime of the IETF. A technology not at the appropriate TRL for the Spring 2022 window of the fund may be so in future windows.

You will be asked to confirm and provide evidence that the technology solution(s) within your application meet the technology readiness criteria at the time of applying.

Energy Efficiency Studies and Deployment

Energy Efficiency technologies will be supported where they have been proven to work through successful operations and/or have been qualified through test and demonstration. This corresponds to TRLs 8, 9 and above.

Deep Decarbonisation Studies and Deployment

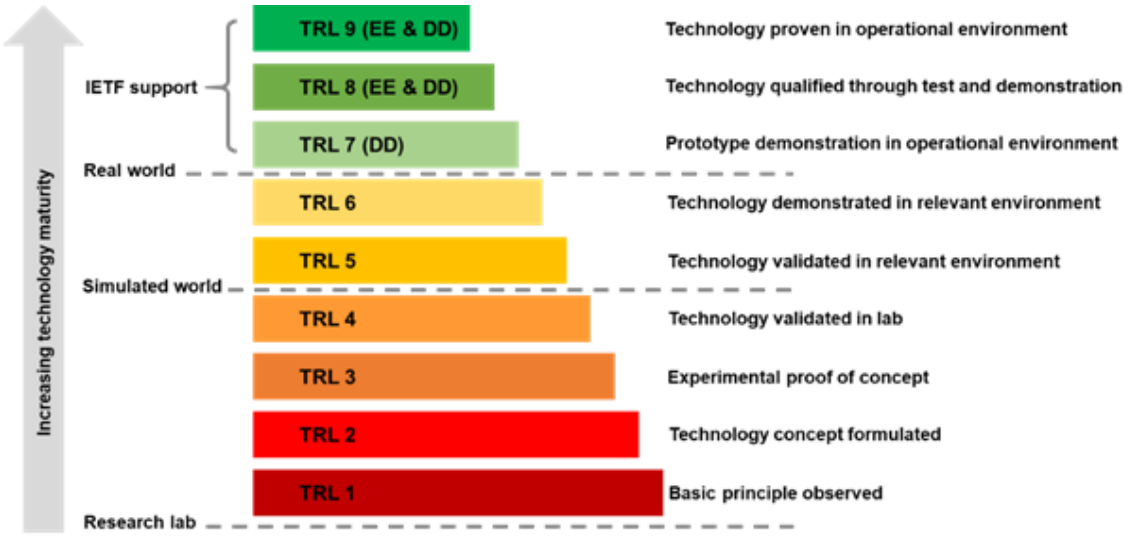
Deep Decarbonisation technologies may be less developed in commercial settings, and the IETF will therefore support technologies at TRLs 7, 8, 9 and above. This means that the technology must either:

- have been proven to work through successful operations and/or is qualified through test and demonstration

  or

- is currently at a prototype stage or requires demonstration of an actual system prototype in an operational environment

Figure 2: Technology Readiness Levels



3.3.3 Activities the IETF will not support

The IETF aims to fund projects that transform industrial energy efficiency or industrial emissions. We will therefore not fund projects for which there is existing support through government schemes or an established market.

The IETF will only support proposals that are aligned with the Net Zero pathway for industry. For these reasons, proposals which fall under the headings below are not in scope of the current competition.

New builds and expansions

Energy and emissions savings must be measured and take place at site level where there is an existing, identified operational industrial process. This means that funding cannot be used to:

- support capital delivery of new build plant.
- repurpose a manufacturing site for a new industrial process.
- cover the costs of a project which aims to expand the capacity at an existing plant.

An exception would be where the measure itself directly leads to a change in production levels or productivity, this might be the case for energy efficiency measures which achieve a per unit saving in energy consumed. In this scenario the IETF can support the specific elements of the project which can be identified as energy efficiency or emission saving measures (see eligible costs section for further guidance).

Repair and maintenance

The IETF funding cannot be used to support the costs of repair and maintenance that would be undertaken in the normal course of business. This includes both repairs to or replacement of components in an industrial process with an identical model or a different model with equivalent performance or capabilities. Any maintenance checks or tests required to identify such issues will also not be funded.

We cannot support any costs incurred from energy efficiency or decarbonisation measures that bring the site or equipment up to minimum legal standards.

Building improvements

The IETF will not support projects that upgrade systems in buildings that are not integral to the industrial process itself. This includes but is not limited to:

- Building lighting
- Space heating and cooling where not integral to the industrial process

Plant closure projects

The IETF will not support projects related to production capacity reductions or plant closure where it is not required to deploy or retrofit equipment to achieve energy or emissions savings.

Production of fuels

The IETF will not support the costs of installation, operation or maintenance of equipment related to the production of fuels, including but not limited to:

- biofuels (including anaerobic digestion and pyrolysis facilities)
- synthetic fuels
- hydrogen fuel

Electricity generation

The IETF will not support the costs of purchasing, installing, and maintaining renewable electricity generation equipment including:

- solar panels
- wind turbines
- marine and hydro technologies
- biomass (unless part of a CHP project, in which case this is subject to certain conditions as set out in the technology Annex A)

The IETF does, however, support other means of electricity generation where this involves recovering waste energy from an industrial process at the lead applicant's site. Electricity generation projects may be supported where this is produced using:

- waste heat or waste pressure,
- waste process gas
- waste process liquid not suitable for transport use
- CHP subject to certain restrictions (see technology Annex A)

Where the IETF supports electricity generation as described above, the electricity must be used to power an existing industrial process within the applicant's own site and cannot be used to export any power beyond the site boundary.

The IETF will not cover the costs of linking the site to local or national gas and electricity grids or other off-site fuel supplies. Work required within the site boundaries to enable the switch may be covered, however.

Combined Heat and Power (CHP) plant installations and upgrades

The IETF will only support investment in CHP plants as part of the decarbonisation competition strand. CHP proposals must involve an eligible fuel switch.

New build or upgrades to CHP plants that do not involve an eligible fuel switch will not be in scope of the competition. Alternative financial incentives and government subsidies are available for CHP projects provided the sites seek accreditation with the CHP quality assurance (CHPQA) programme, which currently provides:

- Beneficial treatment under climate change levy (CCL) and fuel duty
- Beneficial treatment under the carbon price support (CPS) rates of tax
- Exemption from Business Rates of Power Generating Plant and Machinery

Energy efficiency and decarbonisation measures in transportation

The IETF will not support projects related to modes of transportation used on or off site, including but not limited to:

- Off road machinery (such as forklifts and tractors)
- Heavy-duty vehicles (such as diggers, cranes, or excavators)
- Automotive vehicles, heavy and light goods vehicles
- Rail
- Ships, boats, barges
- Conveyor belts to transport materials or goods off-site (rather than between on-site production stages which would be in scope; in such scenarios, the conveyor belt must be replacing a similar piece of equipment and not a different mode of transportation)

3.4 Additional Information

In this section we ask you to provide some additional information which may be used for administrative purposes and for the future monitoring and evaluation of the IETF. You will be asked:

- for information about the meter point numbers for the project site (deployment only)
- whether your project will result in your business taking on any additional, permanent full time equivalent jobs, and if so, how many.

You will also be asked for the following information, which, in addition to the uses outlined above, may also be used at the award and due diligence stage, should you be successful at the initial assessment stage. You will be asked:

- for information about participation of the relevant installation or site in the UK Emissions Trading Scheme, Climate Change Agreements and/ or Energy Intensive Industries (EII) compensation scheme.
- whether you have submitted your proposal to previous IETF competition window. Please see section 2.4 of the guidance for more details. There are no limits to the number of times you may resubmit an application

4.0 Finance Form and Funding Rules

The IETF will only award funding where it can be demonstrated that the grant requested by the applicant is directly needed for the costs of the study or deployment project undertaken. It is your responsibility to ensure these details are correct and are in line with the relevant Subsidy Control rules and regulations.

You will be required to fill out a finance form detailing lead applicant and project partners' expenditure, eligible costs, grant amount requested and match funding. Further guidance is provided below and in the finance form.

The finance form allows applicants to aggregate up to five projects or studies in a single application. As mentioned earlier, applicants cannot mix energy efficiency and deep decarbonisation projects together, studies and deployment together, or FEED and feasibility studies together. Each project or study within an aggregated application will be assessed on its own merits. You will need to justify all costs claimed, either in the finance form, or as part of the application questions, as signposted. Further guidance on each area is provided below.

4.1 Lead Applicant and Partner Expenditure

The finance form will ask you as the lead applicant to set out your project or study expenditure. It will cover the following separate cost areas, some of which may not be applicable, depending on the project or study:

- Direct labour costs incurred by the applicant from using employed staff on the project or study (up to ten different roles).
- Overhead, which is typically a percentage of your direct labour cost.
- Materials that make up a project, such as components and hardware.
- Capital equipment used during a study or to help deploy a project, calculated as a depreciation charge. This can be either new or existing equipment.

- Subcontractor costs.
- Travel and subsistence.
- Other, for anything else that does not fit into the above categories.

The finance form provides room for ten separate cost lines for each type, except for Materials, which has twenty lines. You must be able to justify each cost line and, for deployment projects and engineering studies, split these costs across the maximum two-year installation period. If you are collaborating with project partners, you will then have the opportunity to supply the same detailed project expenditure for each partner.

4.2 Eligible Costs and Grant Amount Requested

In the finance form you will be asked to set out the project costs that are eligible to receive grant funding for the lead applicant and each partner (if applicable), and the amount of grant funding you are requesting. The relevant section will check that the support requested does not exceed the maximum available for the lead applicant and each project partner, which varies by partner type as explained below.

When you apply to the IETF you will need to determine whether the costs associated with the project or study are eligible to receive grant funding. The section below defines eligible costs for each strand of the competition and how these can be derived. You may not be able to claim the full eligible costs for your project or study. The maximum amount of grant funding that you can claim is determined by rules on Subsidy Control set out below.

You will need to justify that the costs you intend to claim against are necessary and directly linked to the study or successful deployment of the project. Where the lead applicant is collaborating with other project partners, the lead applicant must set out in the application each project partner's eligible costs.

The following costs are ineligible for all strands of the competition:

- Costs not directly linked to the achievement of the study, deep decarbonisation or energy efficiency benefit.
- The value of contributions in kind, for example a contribution in goods or services as opposed to money.
- The costs of any preparatory work conducted before the Grant Funding Agreement is signed.
- Costs incurred from production down-time.

4.2.1 Eligible costs for Studies

The eligible costs for studies are the costs incurred in the process of producing the final study 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. Costs associated with testing of products, processes and services are eligible provided they cannot be used, in any form, in industrial applications or commercially. Equipment cost claims should therefore reflect only the usage period relevant to the study based, for example, on depreciation or rental costs. Costs for developing prototypes and pilots are not eligible.

4.2.2 Eligible costs for Deployment

The IETF will provide grant funding towards the up-front costs of deploying an energy efficiency or a decarbonisation measure on an existing industrial process. Examples of the type of costs that are eligible are capital and material costs, subcontractor costs, and direct labour costs for the installation of the measure. Ongoing operating costs are not covered by this competition.

The IETF will only award grant funding towards projects where it can be demonstrated that these costs are additional and necessary to achieving the energy or emissions saving. The investment costs necessary to achieve the higher level of energy efficiency or decarbonisation will be determined as follows (see Figure 3 for a flowchart guide):

- where the costs of investing in energy efficiency or decarbonisation can be identified in the total investment cost as a separate investment, this cost will constitute the eligible costs. The reference case is zero investment.
- in all other cases, the costs of investing in energy efficiency or decarbonisation are identified by reference to a similar investment (for example, replacing equipment on a like for like basis) that would not achieve the desired outcome. The difference between the costs of both investments identifies the energy efficiency or decarbonisation-related cost and constitutes the eligible costs.

Specifying the eligible costs in this way helps ensure that the costs supported by the IETF can be fully justified on the basis of the energy saving or decarbonisation benefit. The use of a reference case removes costs that might otherwise be associated with the general maintenance and upkeep of the site’s productive capacity, expansion of capacity, or investment that might be needed to comply with current or future regulations. The full costs of replacing productive industrial process equipment would therefore typically not be covered.

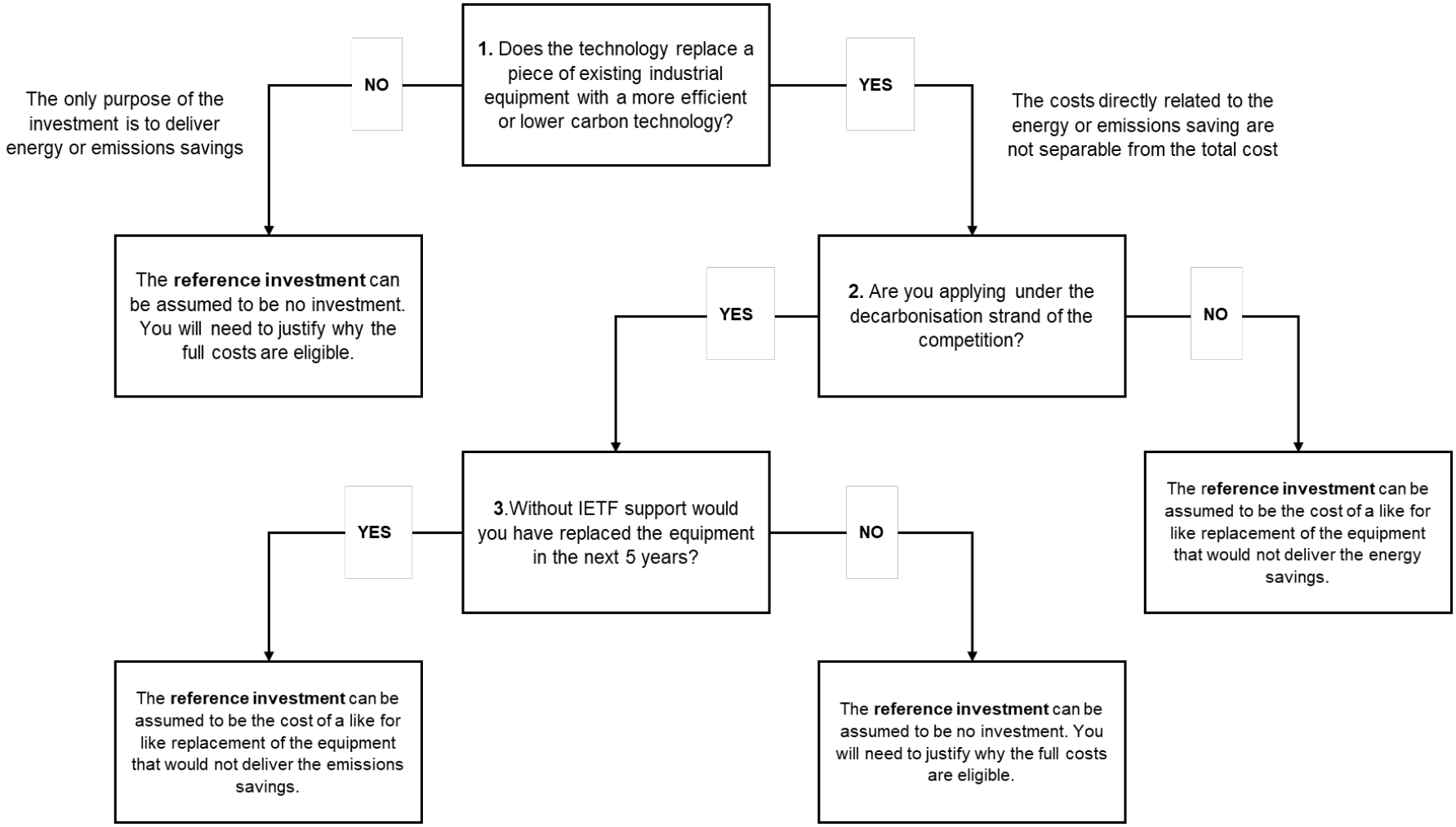
In some instances, businesses may be replacing equipment ahead of standard investment cycles. In this case we have adjusted the rules for decarbonisation measures so that applicants may claim the full costs of replacement if without IETF support you would not have replaced the equipment in the next five years. This aims to encourage early action and also recognises that there is typically no financial return to investing in decarbonisation measures (as there is for energy efficiency measures).

4.3 Reference Case

If you are applying with a deployment project, you must describe your reference case in your application. The reference case should be a technically comparable investment, meaning an investment with the same production capacity and all other technical characteristics (except those directly related to the extra investment for the targeted objective). The reference case should be similar in terms of size and capacity and meet relevant minimum standards.

Your reference case is your justification for your eligible costs and will be tested at assessment and due diligence stages. To help you interpret the subsidy control rules for your own project we have provided a flow diagram and example questions below which suggests what the appropriate reference case might be in different scenarios. This logic should be applied to all individual elements of the project(s), testing whether the specific energy or decarbonisation costs can be separated out or otherwise justified.

Figure 3: Guide for determining the reference case for deployment investments



Question 1: Does the technology replace a piece of existing industrial equipment with a more efficient or lower carbon technology?

Explained:

If the technology's only purpose is to achieve energy or emissions savings, and no investment by the beneficiary would have been necessary in the absence of IETF support, the total investment costs could be considered eligible. The reference case cost would be zero and it is possible to consider the total investment costs as eligible costs. You will need to justify this position in your application.

Example 1: An applicant wants to recover waste heat to use this within the industrial process and thereby reduce energy by displacing another heat source. The heat recovery technology which will be installed has been developed specifically for this purpose, and is a separable piece of equipment that can be installed alongside the existing industrial process.

Example 2: An applicant wants to install a carbon capture technology and make the necessary adaptations to their site in order to connect to an external carbon transport network. The technology is separable from the rest of the industrial process and its only purpose is to deliver carbon savings.

If you are fully replacing a piece of existing equipment your reference case should typically refer to a similar investment which would not have achieved the energy or emissions saving benefit, e.g. replacing the equipment like-for-like. The reference case must have the same production or output capacity as the new investment. The difference between the costs of both cases of investment identifies constitutes the eligible costs. Full project costs are not applicable to these kinds of projects as fully replacing a piece of equipment will have multiple benefits beyond the energy or emissions saving which the IETF aims to achieve.

Question 2: Are you applying under the decarbonisation strand of the competition?

Example 3: A company is operating a boiler to heat an industrial process. The company wishes to replace the boiler with the best available on the market which would lead to significant energy efficiency savings. The output capacity of the boiler will otherwise remain the same. In the reference case for this project, the applicant should provide the cost of replacing the system with a similar, less efficient model they could buy from the market and which meets minimum standards. The cost difference between this and the application project would be compared, with the difference being the eligible cost.

Explained: Different rules apply for the deployment of decarbonisation technologies and energy efficiency technologies as they have different outcomes.

Question 3: Without IETF support would you have replaced the equipment in the next 5 years?

Explained:

If the existing equipment is coming to the end of its useful life and you would have replaced the equipment in the next 5 years without IETF support, then you will need to provide a reference case. Your reference case should consider the investment you would have made without IETF support and the difference in costs would constitute the eligible costs. The reference case must have the same production or output capacity as the new investment.

As one of the main purposes of the fund is to incentivise the adoption of decarbonisation technologies, those projects that are brought forward by a period of five years or more will be eligible for full project costs providing that the reference case justifies why the project could not be undertaken within the next five years. This should include the typical useful life of the equipment and when it was originally purchased. If sufficient justification is provided, the full costs of the project can be claimed as eligible.

4.4 Subsidy Intensities

Subsidy intensity is the proportion of a project's eligible costs that grant funding may cover. It is the maximum amount of funding that can be applied for. However, BEIS expects applicants to present the minimum funding necessary for the project to go ahead – this may well be less than the maximum legal intensity. If we determine that you have requested more funding than needed, you may be offered a lower grant amount. If this lower amount takes your application below the minimum thresholds set out above, your project will no longer be eligible for funding.

This competition provides funding in line with the UK's obligations and commitments to subsidy control, which is a set of rules that determine the amount of subsidy that can be requested. These rules aim to regulate any advantage granted by a public sector body which threatens to, or actually distorts, competition in the United Kingdom or between NI and the EU. Certain subsidies may also be subject to EU State aid rules under the authority of the European Commission according to Article 10 of the Northern Ireland Protocol (NIP). For further information on this please see the Northern Ireland Protocol and Article 10 Section.

Please note the following general rules:

- An organisation or enterprise can fund and receive subsidies on multiple projects as long as it is able to show that each project is a separate investment.
- You must not claim subsidy funding from any other source for the same set of eligible costs. This would constitute duplicate funding. Where the lead applicant is collaborating with other project partners, the lead applicant must set out in the application each project partner's eligible costs. Please note however that BEIS will only have a legal relationship with, or pay money to, the lead applicant.

- The maximum grant value that each partner can claim is detailed in the Organisation Type section. If your organisation's work on the project is mostly commercial or economic, your funding request must not exceed the limits set out in this section. These limits apply even if your organisation normally acts non-economically.
- The IETF is unable to award grant funding to organisations that are considered to be in financial difficulty. It is the applicant's responsibility to ensure this is not the case but we will conduct financial viability and eligibility tests to confirm this is not the case following the application stage. The type of test you will undertake is dependent on your status with regards to the Northern Ireland Protocol. Please see the 'Organisations or Enterprises in Difficulty' section for more information.

If there are any changes to the following requirements that mean we need to change the terms of this competition, we will update this guidance as soon as possible and inform any businesses that have started applications online. Further information about the UK subsidy control requirements can be found within the EU-UK Trade and Cooperation agreement and any subsequent guidance from BEIS. It is the lead applicant's responsibility to make sure that the funding awarded to you is compliant with all current subsidy control legislation applicable in the United Kingdom. If you are in any doubt, you should seek independent professional advice about your eligibility.

The subsidy intensities below are compatible with both UK and EU rules, meaning that projects covered by the Northern Ireland Protocol are eligible for the same intensity of funding as any others in the UK.

Applicable subsidy intensities for this competition will depend on:

- The type of organisation.
- Your organisation's size.
- Your organisation's location.
- The competition strand you are applying to.
- The following section sets out how these are defined and then how those definitions affect subsidy intensity.

4.5 Organisation Types

Organisations that can act as collaborating project partners fall into 3 categories:

- businesses
- research organisations
- public sector organisations or charities undertaking research activity

4.5.1 Business – organisation size

A business is defined as an organisation or enterprise engaged in commercial activity. Businesses are categorised as micro, small, medium, or large, and this categorisation determines the levels of grant funding that can be claimed through the deep decarbonisation deployment, energy efficiency deployment and studies competitions.

Businesses can determine their size based on the thresholds set out in the table below. The factors determining your business size are:

- staff headcount;
- **either** annual turnover or balance sheet total

Business category	**Staff headcount**	**Turnover**	**or** **Balance sheet total**
	Threshold must be met	At least one of the thresholds must be met	
Medium-sized	< 250	≤ £44m	≤ £38m
Small	< 50	≤ £9m	≤ £9m
Micro	< 10	≤ £2m	≤ £2m

If you have a parent company or a part of a larger business group, then the thresholds apply to the group as a whole. A large business in this context means any enterprise which exceeds the thresholds in the table.

4.5.2 Business - organisation location

The government can provide additional funding to businesses which intend to carry out their project in an area of lesser economic advantage. This applies only to deployment projects and not to studies.

More generous maximum subsidies can be given where the site is located in ‘a’ and ‘c’ areas. To determine if you fall into an ‘a’ or ‘c’ area, please see this map, which will remain in use for the remainder of the IETF competition.

Being located in an area of lesser economic advantage does not confer a right to financial assistance; rather, it allows the public sector to provide certain types of assistance if it wishes.

4.5.3 Research organisation

Research organisations which are engaged in economic activity as part of the project will be treated as business enterprises for the purposes of funding.

When referring to research organisations, the department 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. Organisations or enterprises 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
- charities

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

Any research organisations in your project team undertaking non-economic activity as part of the project can share up to 30% of the total eligible costs. If your project team contains more than one research organisation undertaking non-economic activity, this maximum is shared between them.

In relation to the contribution of universities to the project, 80% of their full economic costs can be set out in the application. For all other research organisations, 100% of full economic costs can be included in the application.

Research organisations should be non-profit distributing to qualify. They should explain how you will disseminate the output of their project research as outlined in the application.

4.5.4 Public sector organisation or charity

Public sector organisations and charities can work with businesses to achieve innovation through knowledge, skills and resources. These organisations must not take part in any economic activity or gain economic benefit from a project. As part of the application 100% of their costs could be eligible under the following conditions:

- they are undertaking research (this may be experimental, theoretical or critical investigation work to gain knowledge, skills or understanding vital to the project)
- they meet requirements for dissemination of their project results and they state in the application how they will do this
- they include their eligible costs for research purposes in the total research organisation involvement
- they are not applying for funding towards costs already being paid by the public purse such as labour and overheads.

4.5.5 Third sector

Third sector organisations are primarily voluntary and community, such as associations, self-help groups, mutual and cooperatives. Third sector organisations can be non-funding project partners in an application.

4.5.6 Organisation Size & Grant amount requested

The amount to funding you may be able to receive will also depend on which competition strand you are applying into.

Feasibility studies

The total eligible costs for a feasibility study application must be at least £30,000. The maximum grant that can be awarded for a feasibility study is £7 million.[6]

For feasibility studies you could receive funding for your eligible costs of:

- up to 70% if you are a micro or small organisation
- up to 60% if you are a medium-sized organisation
- up to 50% if you are a large organisation

[6] Please note that for Feasibility and engineering studies it is the eligible costs that are relevant to determining whether a project meets the minimum threshold requirement. However, it is the total grant amount requested which is relevant to the maximum threshold requirement.

Engineering studies

The total eligible costs for an engineering study application must be at least £50,000. The maximum grant that can be awarded for an engineering study is £14 million.

For engineering studies you could receive funding for your eligible costs of:

- up to 45% if you are a micro or small organisation
- up to 35% if you are a medium-sized organisation
- up to 25% if you are a large organisation

If your engineering study project qualifies as an ‘effective collaboration’ or widely disseminates knowledge, you could receive funding for your eligible costs of:

- up to 60% if you are a micro or small organisation
- up to 50% if you are a medium-sized organisation
- up to 40% if you are a large organisation

‘Effective collaboration' means collaboration between at least 2 project partners. The goal must be either:

- to exchange knowledge or technology

  or

- to achieve a common objective based on the division of labour where the parties jointly define the scope of the collaborative project, contribute to its implementation and share its risks, as well as its results

Contract research and provision of research services are not considered forms of collaboration. For effective collaboration to apply between businesses no one business partner can take more than 70% of the total eligible project costs. For collaborations between businesses and research organisations, the research organisation must bear at least 10% of the total eligible project costs and have the right to publish its own research.

Energy Efficiency Deployment:

The minimum grant requested for an energy efficiency deployment application must be at least £100,000. The maximum funding that an organisation or enterprise can claim when submitting an application through the Energy Efficiency Deployment competition is £14 million per project.

If your project is located in a type ‘a’ economic area (see explanation above) you could receive funding for your eligible project costs of:

- up to 65% if you are a micro or small organisation
- up to 55% if you are a medium-sized organisation
- up to 45% if you are a large organisation

If your project is located in a type ‘c’ economic area you could receive funding for your eligible project costs of:

- up to 55% if you are a micro or small organisation
- up to 45% if you are a medium-sized organisation
- up to 35% if you are a large organisation

If your project is located in another area you could receive funding for your eligible project costs of:

- up to 50% if you are a micro or small organisation
- up to 40% if you are a medium-sized organisation
- up to 30% if you are a large organisation

Deep Decarbonisation Deployment

The minimum grant requested for a decarbonisation deployment application must be at least £100,000. When submitting an application through the Deep Decarbonisation Deployment competition the maximum funding is £30m.

As with energy efficiency deployment projects, the government can in certain circumstances, offer additional financial support to organisations acting economically if they are conducting projects located in specific geographical areas.

If your project is located in a type ‘a’ economic area (see explanation above) you could receive funding for your eligible project costs of:

- up to 85% if you are a micro or small organisation
- up to 75% if you are a medium-sized organisation
- up to 65% if you are a large organisation

If your project is located in a type ‘c’ economic area you could receive funding for your eligible project costs of:

- up to 75% if you are a micro or small organisation
- up to 65% if you are a medium-sized organisation
- up to 55% if you are a large organisation

If your project is located in another area you could receive funding for your eligible project costs of:

- up to 70% if you are a micro or small organisation
- up to 60% if you are a medium-sized organisation

- up to 50% if you are a large organisation

4.6 Match funding

In this section of the finance form you will be asked to explain how the project will be funded in addition to the grant requested. The IETF provides partial grant funding towards the cost of the project. Industry must also contribute funding, either through their own resources or from third parties. These contributions cannot be ‘in kind’, for example a contribution of goods or service as opposed to money.

Please note, if your application is successful and you accept a grant offer, you will be required to declare that you are not receiving duplicate funding in respect of any activities paid for in full using the grant. It is your responsibility to ensure that the cumulative total of public funding and subsidy intensity you are receiving for the project does not exceed the limits set out under the subsidy control rules for this competition.

4.7 The Northern Ireland Protocol

The rules set out in this document apply equally to all applicants from England, Wales and Northern Ireland that are eligible to receive funding. Grants that are subject to Article 10 of the Northern Ireland Protocol (NIP) to the UK/EU Withdrawal Agreement will also be subject to scrutiny from the European Commission. This is most likely to apply to applicants and partner organisations based in Northern Ireland, but in limited circumstances may also affect those in England and Wales.

You will be subject to Article 10 of the NIP if you are an applicant who is conducting activities that will affect trade in goods or electricity between Northern Ireland and the EU as envisaged by Article 10 of the Protocol on Ireland/Northern Ireland in the EU Withdrawal Agreement.

In your application, you will be asked some questions that will help BEIS determine whether you are likely to be subject to Article 10 of the NIP. These questions are only asked for reporting purposes, answers do not affect your grant awards application in any way. These questions have a yes / no format, you should consider the activities of your business in its entirety and project partners when answering. If your answers indicate that you are in scope of the NIP, further questions will be asked. These additional questions differ according to the location of your business.

Any subsidy awarded by the UK Government is subject to the prevailing subsidy control regime and applicants should familiarise themselves with the relevant rules set out in this guidance.

For further information, please see section 7 of the BEIS Technical Guidance on the UK’s International Subsidy Control Commitments.

4.8 Organisations or enterprises in difficulty

Organisations that fall under Article 10 of the Northern Ireland Protocol will have to undergo the Undertaking in Difficulty test, as stipulated by EU State aid rules. Those subject to UK subsidy control rules will undergo a similar test. Both tests ensure that grant funding will not be provided to organisations where one of the following circumstances has occurred:

- In the case of a limited liability company, where more than half of its subscribed share capital has disappeared as a result of accumulated losses (other than an SME that has been in existence for less than three years or, for the purposes of eligibility for risk finance aid, an SME within 7 years from its first commercial sale that qualifies for risk finance investments following due diligence by the selected financial intermediary). This is the case when deduction of accumulated losses from reserves (and all other elements generally considered as part of the own funds of the company) leads to a negative cumulative amount that exceeds half of the subscribed share capital, which includes any share premium. Limited Liability Company is defined as: “public companies limited by shares or by guarantee, private companies limited by shares or by guarantee.”
- In the case of a business where at least some members have unlimited liability for the debt of the business, where more than half of its capital as shown in the business accounts has disappeared as a result of accumulated losses (other than an SME that has been in existence for less than three years or, for the purposes of eligibility for risk finance aid, an SME within 7 years from its first commercial sale that qualifies for risk finance investments following due diligence by the selected financial intermediary). A business where at least some members have unlimited liability for the debt of the business is defined as: “partnerships, limited partnerships, unlimited businesses.”
- Where the organisation or enterprise is subject to collective insolvency proceedings or fulfils the criteria under UK law for being placed in collective insolvency proceedings at the request of its creditors.
- Where the organisation or enterprise has received a rescue subsidy and has not yet reimbursed the loan or terminated the guarantee, or has received a restructuring subsidy and is still subject to a restructuring plan.

In the case of an organisation or enterprise that is not an SME, where for the past two years:

- The organisation or enterprise’s book debt to equity ratio has been greater than 7.5 and
- The organisation or enterprise’s earnings before interest, taxes, depreciation and amortization (EBITDA) interest coverage ratio has been below 1.0

4.9 Financial accounts

You will be asked to provide financial information relating to you 'the applicant company', your ultimate parent company and your Group (if applicable). Should you be unable to provide this information at application stage, you will be asked to explain why. This information will be used to conduct due diligence on your application, should you be successful during the initial assessment process, although further information may be required.

This information should consist of:

- Audited (or unaudited if applicable) accounts for both the applicant and ultimate parent company along with the Group (if applicable) for the previous two financial years.
- Management accounts for both the applicant company and ultimate parent company for the remainder of the current financial year and financial forecasts for the following four financial years.
- Draft accounts where the year-end has passed, and the statutory accounts are not yet available. These should be provided for both the applicant and ultimate parent company.

Parent Company Guarantee

If your application is successful, and you have a parent company, BEIS will require a parent company guarantee as part of the due diligence process. This guarantee will be required from your ultimate parent company (as determined by BEIS). BEIS will also review the financial viability of the relevant parent company and run checks on that parent company. Failure to provide such a guarantee or information in respect of a relevant parent company may result in an applicant not being made an offer of grant funding.

5.0 Assessment Phase

Applications which successfully pass the eligibility checks will be put forward for initial assessment. This section outlines the criteria against which applications will be competitively assessed, and the assessment process for each strand.

5.1 Studies

Applications for studies will be assessed against the criteria set out below, which are weighted. The weighting will be added after your assessment has been completed. Applications will need to pass minimum quality thresholds. Applications which pass these minimum thresholds will be ranked by the highest score before being considered by the BEIS Grant Award Panel.

Applicants will need to provide a project plan and risk register as part of the application. Additional supporting information may also be submitted. This should be limited to information which is required to support, give context to, clarify or justify answers given. Where possible, supporting information should be clearly cross-referenced in the answers for ease. Supplementary information will only form part of the assessment if it is clear, relevant and of reasonable length.

Criterion	Weighting	Questions asked	Scoring Guide
Study Overview	20%	You will be asked to: • Give an overview of the objective of this study • Describe the project delivery plan, using a Gantt chart, including work packages and deliverables • Give details of any partners and sub-contractors who you will work with to carry out the study successfully and how they will be managed • Describe the roles, skills and experience of key members of the team (company staff and contractors) plus project management strategy • Describe the risks (technical, commercial, project delivery etc.), evaluate their impact and likelihood and describe the corresponding mitigation actions To support your answer you must submit: • a project plan (Gantt chart) • a risk register	In this section you are asked to explain the objective of this study alongside resourcing requirements and delivery plan. You will be scored based on the information provided across these topics including: • the appropriateness of the project team's skills and experience, • the project timeline and the identified work packages • the strength of the team and their suitability for their role on the project • project plan with suitable timescales given to each task • a robust risk management plan with key risks outlined and their mitigation plan Higher marks will be awarded to applicants that demonstrate you are well placed to carry out the project and have appropriate skills and experience. Higher scoring proposals will include the following: clearly defined objectives and rationale for the project, well defined roles with strong evidence that the project team will work well (where relevant), a clear and commensurate project plan with the work packages described, key risks and uncertainties of the project have been considered and mitigated. The study has high likelihood of successful delivery.

Criterion	Weighting	Questions asked	Scoring Guide
Technical Feasibility	20%	You will be asked to: • Give an overview of the technology to be explored • Describe or explain the justification for choosing this technology • Describe or explain the evidence of the concept being scientifically or technically feasible • Describe or explain the current development status of the technology, referring to it's TRL level • Describe or explain the nature of the outputs you expect from the study, such as a feasibility study report, an engineering design (for example, front-end engineering design), a report producing engineering plans (for example, approved for design standard) • Describe or explain how you will deploy the technology, are there any other barriers to deployment of the technology that must be overcome? What internal processes would have to be overcome?	In this section you will be asked what potential solution to improve the energy efficiency or reduce the greenhouse gas emissions of your industrial process has been identified. This section asks the applicant to describe the technical solution and ultimate deployment project you would undertake following the study. It assesses feasibility of the subsequent deployment of the technology following the study by seeking evidence and justification for its selection. The study should not be an options analysis that is seeking the correct technology but a piece of work to progress the project toward the next stage of deployment. Broadly speaking this is technical feasibility, engineering design, deployment. The outputs of the study should demonstrate how they enable the project to move to an investment decision. You will be assessed and scored based on the quality and clarity of the stated outputs, the appropriateness of these to enable next stage action as well as the strength of the justification for the technology choice and its technical feasibility for such a planned deployment. Higher marks will be awarded to applications where the technical scope of the project is clear with well-defined outputs linked to a broader deployment plan. Strong evidence should be given that the chosen technology is

Criterion	Weighting	Questions asked	Scoring Guide
		• Are there any potential negative impacts that are likely to occur if the technology were to be deployed in the future? • You can submit an additional appendix demonstrating where the chosen technology has been deployed in a similar or comparable operational environment.	appropriate for its application and is technically feasible with a clear route to deployment.
Potential for Carbon and Energy Savings	25%	You will be asked to: • Describe or explain what potential there is to achieve realistic emission and/or energy savings by implementing the project explored through this study • Describe or explain why this technology solution or solutions were chosen and why other options were discounted • Describe or explain how the solution is aligned with the government's commitment to reach net zero by 2050 and your own decarbonisation plans	In this section you will be asked to describe and justify the anticipated benefits of the project or projects explored through the study, including predicted carbon savings and/or energy savings. This section is assessing the potential emission savings and/or energy savings from the project when deployed. You will be scored based on the quality and credibility of the emissions reduction justification and/or energy saving reduction; including realism of assumptions and acceptability of arguments used. You must provide predicted emissions savings in tCO_2e per annum, and expected changes to energy use in MWh per annum. If the project would save energy, please also include the predicted fuel bill savings in £ per annum. Please also provide an estimate of the expected lifetime of the equipment once deployed. Estimates must be in relation to a counterfactual scenario (e.g. what would

Criterion	Weighting	Questions asked	Scoring Guide
		• Describe or explain how this project goes above and beyond your existing energy and carbon reduction commitments (such as Climate Change Agreements) • You can submit one appendix to provide a case study of a similar project and evidence of carbon saving at another site.	happen if the identified project were not deployed). If your level of output would change as a result of the project, please also provide details of this and how it has informed the estimates. We understand that until the study is complete there will be uncertainty around these estimates. If possible, please include a range around a central estimate and identify any key assumptions or data sources. Higher marks will be awarded to applications where the stated carbon and/or energy savings are credible with strong justification and evidence to support assumptions and calculations used. When deployed, the technology should achieve the carbon and/or energy savings stated, which will improve the performance of the site, sector, or process identified beyond its “do nothing” trajectory. Higher scoring proposals will show that the technology has a clear alignment with the net-zero by 2050 commitment and, whether the study is successful or unsuccessful, there will have been a positive gain in knowledge around the opportunities and limitations of the chosen technology in the sector/process identified.
Study cost/ Value for Money	10%	You will be asked to: • Fill in and upload the finance form. • Give further detail on how your project costs have been calculated	In this section you will be asked to add justification for your project costs and say how you have minimised them to ensure that your proposal provides the best possible value for money for the taxpayer.

Criterion	Weighting	Questions asked	Scoring Guide
		and justify the pricing given to them, providing evidence where possible. • Describe or explain the steps you have taken to minimise these costs to ensure that this study represents value for money for the government	We are looking to see that an applicant has a clear grasp of the costs of the project including supporting evidence to justify the stated costs. We also want to ensure that the applicant is claiming an amount of grant that represents value for the public purse. You will be scored based on the strength of the evidence and justification for the stated costs and the need for the amount of grant support requested. Higher marks will be awarded to applications where the project costs are entirely appropriate and represent excellent value for money, the partners have a clear idea of how they will finance their contribution. The balance of costs and grants between partners and use of subcontractors should be justified and reasonable for the proposed project.
Added value	15%	You will be asked to: • Describe or explain the extent to which any of the study would have still occurred without IETF funding (e.g. would it not have gone ahead at all, or would it still have gone ahead but at a smaller scale?)	In this section you will be asked what would have happened without IETF money. This section seeks justification for the use of public money to support the study. You will be scored based on the strength of that justification. Higher marks will be awarded to applications where there is a compelling case for why public funding is required and the positive difference this funding will make.

Criterion	Weighting	Questions asked	Scoring Guide
		• Describe or explain why some or none of the study would have gone ahead without public funding • Describe or explain why you are not able to wholly fund the study from your own resources or other forms of private-sector funding (such as loans)	Higher scoring proposals will describe alternative sources of support with an explanation of why they are discounted or used in conjunction with the grant funding. It is likely that a very high proportion of the study would not have gone ahead without IETF support.
Replicability	10%	You will be asked to: • Describe or explain how the study could be replicated by others in the sector • Describe or explain how the technology could be adopted in other sectors • Describe or explain any measures you intend to take to encourage the project to be replicated outside your organisation. • Describe or explain how the results of the study will be disseminated to others	In this section you will be asked to describe the extent to which the technology to be explored though this study could be adopted by others in the sector or wider sectors. This section seeks to understand how the project fits into the broader industrial decarbonisation agenda. A technology that is repeatable and scalable across different industries and locations will have more value for industry. It will be scored based on the description of how this project could be repeated. Higher marks will be given where a clear and strong argument is given for replicability with good consideration of other sectors and how learnings from this project will be disseminated. The argument is justified with supporting evidence.

5.2 Energy Efficiency Deployment

Applications for energy efficiency deployment projects will be assessed against the following criteria, which are set out in more detail below:

- **Economic Assessment**: This criterion assesses projects to determine if they represent good value for money for Her Majesty's Government (HMG) and society. This part of the assessment will take into consideration project elements such as: costs, benefits, additionality and risk to the benefits over the lifetime of the deployed asset. The main sources of benefit are the social value of reduced energy consumption, greenhouse gas emissions and air quality emissions.
- **Transformational Assessment**: This criterion assesses projects to determine their compatibility with HMG's Net Zero commitments, allowing applicants to justify their technology choices.
- **Deliverability Assessment**: This criterion assesses the applicant's ability to successfully deliver the project, taking into consideration the proposed plan, team and project management.

  Applicants will need to provide a project plan and risk register as part of the application and will also need to submit evidence to support their answers to the project benefits and additionality sections of the economic assessment section. Optional supporting information may also be submitted in relation to other criteria. Supporting evidence and information should be limited to information which is required to support, give context to, clarify or justify answers given. Where possible, it should be clearly cross-referenced in the answers for ease. Supporting evidence and information will only form part of the assessment if it is clear, relevant and of reasonable length.

Applicants for energy efficiency deployment projects will need to pass minimum thresholds for all three criteria to be considered for funding. Projects will then be ranked according to their score for the economic assessment before being considered by the BEIS Grant Award Panel.

5.2.1 Economic Assessment

Criterion	Questions Asked	Scoring Guide
Project Benefits	• You will be asked to fill in and upload the project benefits calculator. • In the project benefits calculator, you are asked to provide your annual energy use by fuel both before and after completion of the project. Explain how you have calculated these figures and provide evidence to justify your answer. • Will any of your energy consumption either before or after completion of your project include the use of electricity as a fuel? If so, expand on the source of your electricity. If generated offsite, please detail whether it is from the national grid, a local microgrid (and whether or not this uses renewable sources of generation), or other. If onsite, please detail how this is generated. • Will any of the fuel you use either before or after completion of the project be generated onsite? For each fuel generated onsite, provide details on how it will be produced, including the expected MWh of energy use (by fuel) required to generate 1 MWh of your fuel. Include any calculations and evidence that underpin this figure. The amount should reflect your inputs to the project benefits calculator.	Applicants will be asked to fill out the project benefits calculator, which will be used to estimate the value for money to HMG and society of their project. These questions provide the applicant with the opportunity to explain where the figures you input into the calculator have come from, how you have calculated them, and provide any evidence you have to justify these figures. A good answer to these questions will contain clear explanations of how each input to the project benefits calculator has been calculated, with evidence attached to justify these calculations. The strength of the rationale, evidence and justification of the figures used will affect the scores received by a project for this criterion.

Criterion	Questions Asked	Scoring Guide
	• Will your project lead to a change in the production output of the process impacted by your project? If the answer is yes, you will be asked; In the project benefits calculator, you will be asked to provide your annual production output both before and after completion of the project, at the level of the process impacted by the project. Explain how you have calculated these figures and provide evidence to justify your answer. • In the project benefits calculator, you are asked to estimate the asset lifetime of the deployed technology. Explain the rationale behind this figure and provide evidence to justify your answer. Please also include details of when any maintenance or replacement of parts is expected to be required throughout the lifetime of the technology. • You must submit evidence to justify your calculations and will be given the opportunity to upload documents in relation to each question	
Additionality	• Explain what would have happened to the project without IETF funding, outlining the extent to which any of the project would still have occurred and why.	HMG has a duty to make sure it spends taxpayers' money appropriately and in ways that deliver the maximum possible benefit to society. This not only means funding projects that deliver the greatest benefits, but also means not funding

Criterion	Questions Asked	Scoring Guide
	• Where some or all of the project would not have gone ahead without IETF funding, describe how you would have instead used your funds. Would any of this have been used on a different carbon emissions reduction project, and if so, how would the benefits of that project compare to the project you are requesting funding for? • Explain why you are not able to wholly fund the project from your own resources or other forms of private sector funding. You may provide evidence to justify your answer. • If you are subject to another Government programmes that incentivises or requires you to make energy efficiency improvements or greenhouse gas emissions reductions (for example, the UK Emissions Trading Scheme or a Climate Change Agreement), outline your current plans to meet your existing energy efficiency improvement or emissions reduction commitments under these policies, and describe how this project goes above and beyond these. • You must submit evidence to justify your responses and will be given the opportunity to upload documents in relation to each question	projects where some of the benefits would have occurred anyway without HMG funding. Here we are looking for applicants to explain why their project would not be able to go ahead without HMG support, and what would occur in the case that it did not. A good answer to these questions will clearly outline the barriers currently stopping the project from going ahead, how HMG funding can overcome those barriers, and what would occur if HMG funding were not received by the applicant.

5.2.2 Transformational Assessment

Criterion	Questions Asked	Scoring Guide
Net Zero Compatibility	• State what percentage of both your site and process greenhouse gas emissions will be removed by implementing this project, providing evidence to justify your answer. • Please provide a technology justification statement, explaining why you have chosen this technology as the best option for your project. • Explain how your project fits into your site and company's wider plans for Net Zero. Outline what other changes you expect to carry out to both the production process where the project is being applied, and the site as a whole, in order to meet Net Zero, and how this project aligns with those plans.	We are looking for applicants to outline how you are proposing to decarbonise your industrial processes in line with the UK Government's commitment to Net Zero, and how this project fits into those plans. Good answers will outline clearly, with evidence: • The extent to which this project will reduce your process and site greenhouse gas emissions. • How this project aligns with your site and companywide plans to decarbonise. • Why the technology option you have chosen is the most appropriate to support the decarbonisation of your site. • How you are ensuring that you are not locking-in a technology that is not compatible with Net Zero.
Replicability and Scalability	• Provide an outline of how the proposed technology could be replicated and/or scaled across your own site(s), sites within your sector/other sectors or, internationally. Please justify your answer. • Within commercial constraints, outline plans to disseminate decarbonisation information and	We are looking for an explanation of the perceived opportunities for replication or scalability of the project, and for applicants to outline how you plan to share or make use of any learning. A good answer will include, but is not limited to, an explanation of:

Criterion	Questions Asked	Scoring Guide
	lessons learned from this project. Please justify your answer.	• The opportunities for replicability and scalability at the site, sector and cross-sector levels. • Any limitations on replicability and scalability that exist, and how the applicant intends to maximise its potential against this criterion within these constraints. • How the project will be used in the applicant's Net Zero messaging to site staff, the wider business and sector. • How the applicant will support the building a knowledge base that fits within business circumstances, such as speaking at conferences or sharing information with trade associations. • Any commercial constraints that exist for the applicant, and how the applicant intends to maximise its potential against this criterion within these constraints. It is recommended that applicants work with their suppliers/supply chain to develop the answers, paying particular attention to those questions asking for replicability outside of business or sector.

5.2.3 Deliverability Assessment

Criterion	Questions Asked	Scoring Guide
Project Plan	• With the help of a Gantt chart, please show the project plan including work packages, milestones and deliverables. • Give a brief overview of each work package, including the responsible owner, expected costs and timelines of each. • Describe how the project will be managed, outlining any major tools and mechanisms you will use to get a successful project outcome. • Describe what level of contingency (with regards to personnel, timescales etc.) has been allocated within the project and why. • Outline any project dependencies, lead-in times, assumptions or decision-making timescales. • Describe the resources, equipment and facilities needed for the project and how you will access them. • To support your answer, you must submit a project plan (Gantt chart).	We are looking for applicants to identify and describe the actions, milestones and deliverables associated with the project. A good answer will detail deliverables and any interdependencies between tasks and will discuss the project management strategy and provide details relating to specific contents of individual work packages.
Project Team	• Outline the project team structure, including the roles, skills and experience of key members and	A good answer will identify the skills and experiences of in-house staff who will be working on the project and how this relates to the project. A good answer will also consider how the project team will be managed, segregation of duties and

Criterion	Questions Asked	Scoring Guide
	personnel, how their skills and experience will help deliver the project. • Where subcontractors will be employed as part of the project, please describe their roles and expertise, how they are essential for the effective completion of the project and how they will be managed.	include an organogram of the key members of staff including their role and responsibilities. Where subcontractors are being used, applicants should explain why their work could not be covered by internal resource, why the chosen subcontractor has been selected, and how their skills and expertise will ensure the successful completion of the project.
Risk Management	• You must submit a risk register, taking care to include project risks associated with the technology, delivery, project team and financing of the project • In addition, please describe in detail the three main challenges associated with delivery of the project and how these will be mitigated. • Give a brief overview of the risk management process that will be associated with the project, including how new risks will be identified and managed. • Outline if there are any key health, safety and environmental risks associated with delivering the project, and if so, how these will be overcome.	The key risks associated with the project should be identified from a range of sources (e.g., technical, delivery, project team, financing), with these evaluated in the risk register for their likelihood, impact and resulting potential severity. A good answer will present strong mitigation actions to the key risks, showing how far these actions go to managing or reducing these risks. A strategy should be described for how risks will be managed during the project.

Criterion	Questions Asked	Scoring Guide
	Please include details of any permitting that will be required for this project. • To support your answer, you must submit a risk register	
Project Costs	• Please fill in and upload the finance form. • Please describe how you have arrived at the cost estimates provided in the finance form. This should include details on whether you have secured quotes, or how you have otherwise ensured the estimates are reasonable, particularly in cases where one-off capital equipment costs exceed £10,000. • Describe or explain the steps you have taken to minimise costs to ensure that this project represents value for money for the government	In this section you will be asked to add justification for your project costs and say how you have minimised them to ensure that your proposal provides the best possible value for money for the taxpayer. We are looking to see that an applicant has a clear grasp of the costs of the project including supporting evidence to justify the stated costs. We also want to ensure that the applicant is claiming an amount of grant that represents value for the public purse. You will be scored based on the strength of the evidence and justification for the stated costs and the need for the amount of grant support requested. Higher marks will be awarded to applications where the project costs are entirely appropriate and represent excellent value for money, the partners have a clear idea of how they will finance their contribution. The balance of costs and grants between partners and use of subcontractors is justified and reasonable for the proposed project.

5.3 Deep Decarbonisation Deployment:

Applications for deep decarbonisation deployment projects will be assessed against the following criteria, which are set out in more detail below:

- **Economic Assessment**: This criterion assesses projects to determine if they represent good value for money for HMG and society. This part of the assessment will take into consideration project elements such as: costs, benefits, additionality and risk to the energy savings for the lifespan of the project. The main sources of benefit are the social value of reduced energy consumption, greenhouse gas emissions and air quality emissions.
- **Transformational Assessment**: This criterion assesses projects to determine their compatibility with HMG's Net Zero commitments, allowing applicants to justify their technology choices.
- **Deliverability Assessment**: This criterion assesses the applicant's ability to successfully deliver the project, taking into consideration the proposed plan, team and project management.

Applicants may also be asked further technology specific questions, depending on the technology you are deploying through your project. These questions can be found under each technology in Annex A of this document. Answers to these questions will be used to inform the scoring of all three criteria.

> Applicants will need to provide a project plan and risk register as part of the application and will also need to submit evidence to support their answers to the project benefits and additionality sections of the economic assessment section. Optional supporting information may also be submitted in relation to other criteria. Supporting evidence and information should be limited to information which is required to support, give context to, clarify or justify answers given. Where possible, it should be clearly cross-referenced in the answers for ease. Supporting evidence and information will only form part of the assessment if it is clear, relevant and of reasonable length.

Applicants for deep decarbonisation deployment projects will need to pass minimum thresholds for all three criteria to be considered for funding. Projects will then be ranked according to their score for the transformational assessment before being considered by the BEIS Grant Award Panel.

5.3.1 Economic Assessment

Criterion	Questions Asked	Scoring Guide
Project Benefits	• You will be asked to fill in and upload the project benefits calculator. • In the project benefits calculator, you are asked to provide your annual energy use by fuel both before and after completion of the project. Explain how you have calculated these figures and provide evidence to justify your answer. • Will any of your energy consumption either before or after completion of your project include the use of electricity as a fuel? If so, expand on the source of your electricity. If generated offsite, please detail whether it is from the national grid, a local microgrid (and whether or not this uses renewable sources of generation), or other. If onsite, please detail whether this is generated through renewable sources. • Will any of the fuel you use either before or after completion of the project be generated onsite? For each fuel generated onsite, provide details on how it will be produced, including the expected MWh of energy use (by fuel) required to generate 1 MWh of your fuel. Include any calculations and evidence that underpin this figure. The amount	Applicants will be asked to fill out a project benefits calculator, which will be used to estimate the value for money to HMG and society of their project. These questions provide the applicant with the opportunity to explain where the figures you input into the calculator have come from, how you have calculated them, and provide any evidence you have to justify these figures. A good answer to these questions will contain clear explanations of how each input to the project benefits calculator has been calculated, with evidence attached to justify these calculations. The strength of the rationale, evidence and justification of the figures used will affect the scores received by a project for this criterion.

Criterion	Questions Asked	Scoring Guide
	should reflect your inputs to the project benefits calculator. • Will your project use an interim fuel after the project has been completed before fully switching to a decarbonised fuel? If so, provide details of the interim fuel the site proposes to use before the decarbonised fuel comes online, why this has been chosen, and how long it is expected to be used for. • Will your project lead to a change in the production output of the process impacted by your project? If so, in the project benefits calculator you are asked to provide your annual production output both before and after completion of the project, at the level of the process impacted by the project. Explain how you have calculated these figures and provide evidence to justify your answer. • Will your project generate any direct greenhouse gas emissions abatement at the site where the project is being delivered (e.g., any abatement not generated from switching to cleaner fuels, such as carbon capture)? If so, in the project benefits calculator you are asked to provide an estimate for the expected direct carbon abatement your project will deliver per annum. For carbon capture projects, this should be the	

Criterion	Questions Asked	Scoring Guide
	amount of CO_2 you expect your project to capture per annum. Explain how you have calculated this figure and provide evidence to justify your answer. • In the project benefits calculator, you are asked to estimate the asset lifetime of the deployed technology. Explain the rationale behind this figure and provide evidence to justify your answer. Please also include details of when any maintenance or replacement of parts is expected to be required throughout the lifetime of the technology • You must submit evidence to justify your calculations and will be given the opportunity to upload documents in relation to each question	
Additionality	• Explain what would have happened to the project without IETF funding, outlining the extent to which any of the project would still have occurred and why. • Where some or all of the project would not have gone ahead without IETF funding, describe how you would have instead used your funds. Would any of this have been used on a different carbon emissions reduction project, and if so, how would	HMG has a duty to make sure it spends taxpayers' money appropriately and in ways that deliver the maximum possible benefit to society. This not only means funding projects that deliver the greatest benefits, but also means not funding projects where some of the benefits would have occurred anyway without HMG funding. Here we are looking for applicants to explain why their project would not be able to go ahead without HMG support, and what would occur in the case that it did not.

Criterion	Questions Asked	Scoring Guide
	the benefits of that project compare to the project you are requesting funding for? • Explain why you are not able to wholly fund the project from your own resources or other forms of private sector funding. You may provide evidence to justify your answer. • If you are subject to another Government policy that incentivises or requires you to make greenhouse gas emissions reductions (for example, the UK Emissions Trading Scheme or a Climate Change Agreement), outline your current plans to meet your existing emissions reduction commitments under these policies, and describe how this project goes above and beyond these. • You must submit evidence to justify responses to these questions and will be given the opportunity to upload documents in relation to each question	A good answer to these questions will clearly outline the barriers currently stopping the project from going ahead, how HMG funding can overcome those barriers, and what would occur if HMG funding were not received by the applicant.

5.3.2 Transformational Assessment

Criterion	Questions Asked	Scoring Guide
Net Zero Compatibility	• State what percentage of both your site and process greenhouse gas emissions will be removed by	We are looking for applicants to outline how you are proposing to decarbonise your industrial processes in line

Criterion	Questions Asked	Scoring Guide
	implementing this project, providing evidence to justify your answer. • Please provide a technology justification statement, explaining why you have chosen this technology as the best option for your project. • Explain how your project fits into your site and company's wider plans for Net Zero. Outline what other changes you expect to carry out to both the production process where the project is being applied, and the site as a whole, in order to meet Net Zero, and how this project aligns with those plans.	with the UK Government's commitment to Net Zero, and how this project fits into those plans. Good answers will outline clearly, with evidence: • The extent to which this project will reduce your process and site greenhouse gas emissions. • How this project aligns with your site and companywide plans to decarbonise. • Why the technology option you have chosen is the most appropriate to support the decarbonisation of your site. • How you are ensuring that you are not locking-in a technology that is not compatible with Net Zero.
Replicability and Scalability	• Provide an outline of how the proposed technology could be replicated and/or scaled across your own site(s), sites within your sector/other sectors or, internationally. Please justify your answer. • Within commercial constraints, outline plans to disseminate decarbonisation information and lessons learned from this project. Please justify your answer.	We are looking for an explanation of the perceived opportunities for replication or scalability of the project, and for applicants to outline how you plan to share or make use of any learning. A good answer will include, but is not limited to, an explanation of: • The opportunities for replicability and scalability at the site, sector and cross-sector levels. • Any limitations on replicability and scalability that exist, and how the applicant intends to maximise its

Criterion	Questions Asked	Scoring Guide
		potential against this criterion within these constraints. • How the project will be used in the applicant's Net Zero messaging to site staff, the wider business and sector. • How the applicant will support the building a knowledge base that fits within business circumstances, such as speaking at conferences or sharing information with trade associations. • Any commercial constraints that exist for the applicant, and how the applicant intends to maximise its potential against this criterion within these constraints. It is recommended that applicants work with their suppliers/supply chain to develop the answers, paying particular attention to those questions asking for replicability outside of business or sector.
Novelty	• Referring to the TRL descriptions provided in the applicant guidance, outline what TRL level your proposed technology use is. Please justify your answer.	We are looking for applicants to demonstrate how novel their project is. A good answer could include, but is not limited to the following: • What TRL level you consider your project to be, including a justification. • A review of whether you are a first mover, whether in sector or technology.

Criterion	Questions Asked	Scoring Guide
		• Any evidence of the technology/solution being used elsewhere. If the technology is already in widespread use, detail of how much of industry currently uses this proposed technology or its application. • A description of how their project could either drive technology development (increasing TRL) or improve commercial prospects and market understanding of lower TRL measures. In the event that you might not be able to explain how widely used a technology is, we would suggest working with your supply chain to establish this answer as they are likely to know how novel this application is. A lower TRL would score higher than a higher TRL technology.

5.3.3 Deliverability Assessment

Criterion	Questions Asked	Scoring Guide
Project Plan	• With the help of a Gantt chart, please show the project plan including work packages, milestones and deliverables.	We are looking for applicants to identify and describe the actions, milestones and deliverables associated with the project. A good answer will detail deliverables and any interdependencies between tasks and will discuss the project

Criterion	Questions Asked	Scoring Guide
	• Give a brief overview of each work package, including the responsible owner, expected costs and timelines of each. • Describe how will the project be managed, outlining any major tools and mechanisms you will use to get a successful project outcome. • Describe what level of contingency (with regards to personnel, timescales etc.) has been allocated within the project and why. • Outline any project dependencies, lead-in times, assumptions or decision-making timescales. • Describe the resources, equipment and facilities needed for the project and how you will access them.	management strategy and provide details relating to specific contents of individual work packages.
Project Team	• Outline the project team structure, including the roles, skills and experience of key members and personnel, how their skills and experience will help deliver the project. • Where subcontractors will be employed as part of the project, please describe their roles and expertise, how they are essential for the effective completion of the project and how they will be managed.	A good answer will identify the skills and experiences of in-house staff who will be working on the project and how this relates to the project. A good answer will also describe how the project team will be managed, segregation of duties and include an organogram of the key members of staff, including their role and responsibilities. Where subcontractors are being used, applicants should explain why their work could not be covered by internal resource, why the chosen subcontractor has been selected, and how their skills and expertise will ensure the successful completion of the project.

Criterion	Questions Asked	Scoring Guide
Risk Management	• You must upload a risk register, taking care to include project risks associated with the technology, delivery, project team and financing of the project • In addition, please describe in detail the three main challenges associated with delivery of the project and how these will be mitigated. • Give a brief overview of the risk management process that will be associated with the project, including how new risks will be added and managed. • Outline if there are any key health, safety and environmental risks associated with delivering the project, and if so, how will these be overcome. Please include details of any permitting that will be required for this project. • To support your answer you must submit a risk register.	The key risks associated with the project should be identified from a range of sources (e.g., technical, delivery, project team, financing), with these evaluated in the risk register for their likelihood, impact and resulting potential severity. A good answer will present strong mitigation actions to the key risks, showing how far these actions go to reducing or managing these risks. A strategy should be described for how risks will be managed during the project.
Project Costs	• Please fill in and upload the finance form. • Please describe how you have arrived at the cost estimates provided in the finance form. This should include details on whether you have secured quotes, or how you have otherwise ensured the estimates are reasonable,	In this section you will be asked to add additional justification for your project costs and say how you have minimised them to ensure that your proposal provides the best possible value for money for the taxpayer. We are looking to see that an applicant has a clear grasp of the costs of the project including supporting evidence to

Criterion	Questions Asked	Scoring Guide
	particularly in cases where one-off capital equipment costs exceed £10,000. • Describe or explain the steps you have taken to minimise costs to ensure that this project represents value for money for the government	justify the stated costs. We also want to ensure that the applicant is claiming an amount of grant that represents value for the public purse. You will be scored based on the strength of the evidence and justification for the stated costs and the need for the amount of grant support requested. Higher marks will be awarded to applications where the project costs are entirely appropriate and represent excellent value for money, the partners have a clear idea of how they will finance their contribution. The balance of costs and grants between partners and use of subcontractors will be justified and reasonable for the proposed project.

5.4 Submitting your application

The full application for the competition must be submitted online by the deadline at 3pm on the 29th April 2022. The competition will be closed for submissions after this time and late submissions will not be accepted.

All application documents must be submitted via the online application form. In the form there are opportunities to upload relevant supporting documents. In some sections we specify the supporting information which must be uploaded.

As well as completing the application form, each online application must include the following documents:

- Completed Finance Form
- Completed Project Benefits calculator (deployment only)
- Uploaded evidence to support responses to the Economic Assessment questions; supporting evidence is mandatory for the Project Benefits Calculator and additionality answers (deployment only)
- Completed Gantt chart
- Completed risk register for the project
- Optional: additional supporting information, as appropriate.

After you have submitted your application, you will be asked to complete a post-application survey. This is to enable us to understand your experience of the application process, its effectiveness, and where possible, where we could make improvements. Your answers to the survey will not be used to assess your application and survey responses are all anonymous.

6.0 After Submission

6.1 Eligibility Checks

We will first undertake an eligibility check to ensure your proposal meets all the relevant eligibility criteria as set out in this guidance and the technology is in scope.

At any stage in the process BEIS may, at its sole discretion contact applicants to clarify any applications (or parts thereof) which are unclear, contain genuine mistakes, gaps, minor omissions or in relation to ambiguous responses to questions. However, BEIS is not under any obligation to do this. Where any application is not complete or is inconsistent, vague, or ambiguous, BEIS may consider the application on the basis of the interpretation or meaning

that is the most adverse, and / or consider the application as not compliant with the rules of the fund and reject / disqualify it.

6.2 Assessment and Award Process

Applications which are deemed eligible and are in scope will proceed to the initial assessment stage, where each application will be scored on its individual merit. Within each competition strand, projects which pass the minimum threshold for each assessment criterion will be ranked and considered by the BEIS Grant Award Panel, who have the discretion to recommend funding.

The assessment and award process is as follows:

1. Applications are allocated to assessors in a secure and confidential manner, taking into account the assessors' expertise that best match the funding application and avoiding any conflicts of interest.
2. Applications for the same strand are assessed against the same set of scoring criteria. All applications are assessed on individual merit.
3. Each application is marked by three assessors. Each assessor will submit their scores with comments for each application. Scores are then reviewed and moderated. This will inform the application feedback.
4. After assessment, a ranked list of projects, based on scores, will be reviewed by the BEIS Grant Award Panel. BEIS officials will submit a list of recommendations to BEIS ministers for a final decision, based on the panel's advice.
5. Projects which are deemed successful at this initial assessment stage will be required to successfully pass all due diligence checks before a Grant Funding Agreement can be issued. See Section 6.7.

BEIS are looking to fund a portfolio of projects. In the event of oversubscription for a particular strand, BEIS may adopt a portfolio approach which is intended to make sure the IETF has a diverse and balanced spread of projects, tailored to meet the fund's objectives, balanced across the following variables. In the event of oversubscription for a particular strand, it is possible that an application that received lower assessors' scores may be recommended for funding over others in order to achieve a more balanced portfolio of projects. This would involve considering the following variables:

- geographical areas
- technologies
- industrial sectors
- organisation sizes
- project sizes

- site type (clustered and dispersed sites)

6.3 Additional Scrutiny Assessment Process

Projects requesting more than £3m for deep decarbonisation grant funding and £7m for energy efficiency grant funding, may be asked to take part in a phone call with assessors contracted and acting on BEIS' behalf. This additional level of scrutiny is to ensure BEIS is funding projects in line with the ambitions of IETF scheme. The call will enable the assessors to gain a clearer understanding of the information provided in the application form. It will take place before the BEIS Grant Award Panel meets to review feedback from assessors.

6.4 Assessor Confidentiality and Potential Conflicts of Interest

Assessors may comprise BEIS employees and external experts contracted by and acting on behalf of BEIS. External assessors working for BEIS are engaged as individuals, not as representatives of their employer. An assessor must scrutinise the applications themselves and cannot ask anyone else to review an application in their place. Assessors will be briefed by BEIS to undertake assessments according to BEIS's requirements and in accordance with IETF criteria.

All assessors will adhere to confidentiality requirements and must declare any potential conflicts of interest. They will treat applications in the strictest of confidence and adhere to relevant data protection rules. BEIS will not disclose the names of assessors to applicants.

6.5 Notification and Feedback

You will be notified by email from BEIS as to whether your application has passed the initial assessment stage.

This notification does not guarantee funding. Any funding will remain subject to successful completion of due diligence checks to BEIS' satisfaction and your agreement to our proposed form of Grant Funding Agreement. If you are the lead applicant you should ensure any project partners know of the initial decision. The decision on the initial assessment stage is not subject to a right of appeal.

Assessor feedback will be provided by email to all applicants, regardless of whether or not you have passed the assessment stage. This can take up to four weeks after you are notified of the initial decision. Feedback is made up of the comments provided by the assessors and is intended to be constructive. There is no right of appeal against the feedback provided and we will not overturn the feedback should you disagree with a scientific or technical decision that BEIS makes regarding your application.

You may wish to address the assessor feedback in a resubmitted application for any future rounds of the IETF, should you be eligible. Please note that resubmissions may be reviewed by different assessors who will have no prior knowledge of the original application or its feedback. However, it is likely that a re-submitted proposal will not be successful unless changes have been made to the original application.

6.6 Due Diligence

Applications that are successful at the initial assessment stage will need to undergo financial and organisational due diligence checks, which will be carried out by BEIS, before any grant funding can be confirmed. You may be asked to provide further details to enable BEIS to complete the necessary checks. Applicants must be willing to dedicate sufficient resource to assist in completing this process. If further information is requested, you will need to return it within 4 weeks of being notified.

The purpose of these due diligence checks includes, but is not limited to, confirmation of:

- The final amount of the award which will be subject to the evidence you provide and will be the minimum necessary for the project to proceed.
- The reason why you need public support to proceed with the Project and why it could not proceed in the absence of public support.
- The support being compatible with relevant subsidy control rules and regulations that apply to your project.
- The existence of a financially and business credible alternative option (or counterfactual argument) to act as a baseline for comparison of benefits. Subsidies cannot be awarded to projects or activity that would have been funded in any event.
- Your eligible project costs meeting our funding criteria.
- The financial viability of all industry partner organisations. Projects that come within scope of the NI Protocol will undergo an organisation or undertaking in difficulty test. Projects that are subject to UK subsidy control regulations will undergo a financial viability test.
- The satisfactory financial standing of you, the applying company, and of your parent company (if you have one) and their ability to finance the project.

At this stage, you will also be asked to provide a parent company guarantee from your ultimate parent company (as determined by BEIS), where you have a parent company.

BEIS reserves the right to reject your application if the requirements of the due diligence checks are not met or if the checks identify any discrepancies with the information provided that are deemed unacceptable. We may also decide against awarding you funding, or suspend grant payments, if we deem that you have failed to meet the requirements of a funding agreement for a current or previous public funding award.

If the results of the due diligence checks are satisfactory, you will be issued a Grant Funding Agreement which you must sign and return to BEIS. You will need to ensure ongoing compliance with conditions contained in the agreement to receive funding. BEIS will not be responsible for, nor will we make any commitment in respect of, costs that you may incur prior to the signature of any Grant Funding Agreement.

6.7 Successful Applicants: Grant Funding Agreement

If the results of the due diligence process are satisfactory, a Grant Funding Agreement will be issued. The value of grant funding will be agreed through the signing of these documents. These should be signed and returned to BEIS within the timeframe set out in the Grant Funding Agreement. The applicant will need to ensure compliance with conditions contained in the Grant Offer Letter (which shall be provided to the successful applicant along with the finalised Grant Funding Agreement) to receive grant funding.

The Grant Funding Agreement will be drafted in line with Cabinet Office's 'Model Grant Funding Agreement' guidelines. An example draft of the Grant Funding Agreement can be found on the IETF Phase 2 competition page. Please note that this document is an example and provided for information purposes only. The final document that successful applicants will be required to sign may differ from this example, including but not limited to, provisions relevant to individual projects.

The terms of the Grant Funding Agreement are final and not negotiable. If an applicant refuses to agree to the terms of the Grant Funding Agreement, or unduly delays the signing and returning of these documents, BEIS may withdraw the Grant Funding Agreement. The application will be deemed to have been rejected/disqualified from the process.

BEIS will not be responsible for, nor make any commitment in respect of, costs incurred before the signature of any Grant Funding Agreement.

If your application is successful, you will be required to sign a collaboration agreement with your project partners. This will need to be in place before you can sign your Grant Funding Agreement with BEIS. If there are reasonable circumstances which means this cannot be achieved, BEIS will consider these on a case-by-case basis. In such exceptional circumstances, where explicitly agreed with BEIS, the collaboration agreement may be signed as soon as reasonably practicable, and in any event, no later than the first grant payment milestone. No payments against the grant will be made until the collaboration agreement is signed and provided to BEIS. BEIS reserves the right to review the collaboration agreement before issuing the Grant Funding Agreement. Further detail of the requirements will be provided if you are successful.

6.8 Publicity

BEIS may wish to publicise the results of the competition which could include engagement with media. At the end of the application and assessment process, BEIS may issue a press release or publish a notice on its website. These may, for example, outline the result of the competition and describe the projects to be funded. As part of promoting the IETF, if you are successful, you will be required to provide a short overview of your project, including photographs and quotations.

Applicants are not to publish any outcome of this competition without BEIS' express permission. BEIS reserves the right to disqualify or reject any applicant that breaches this requirement. If you have any queries about public relations or media coverage email ietf@beis.gov.uk.

7.0 Project set up and Monitoring

7.1 Project Set up

You will be assigned a Monitoring Officer (MO) at the start of your project. Your MO will help to make sure your project complies with our terms and conditions. They are not responsible for project management. More details will be provided if your application is successful.

Deployment projects will be required to produce a benefits monitoring and verification (M&V) plan on the basis of guidelines provided and agreed by BEIS. Further detail is included below.

7.2 Compliance Monitoring (until project completion)

Throughout your project you will need to provide evidence of ongoing compliance with the terms and conditions of your grant offer, in order to receive payment. This will be done primarily through quarterly review meetings with your MO and may involve site visits by BEIS and its agents or its contractors.

7.3 Claims and Auditing

Costs are only eligible if they are incurred and paid by you between the project start and end dates and as set out in the Grant Funding Agreement. Claims may be subject to an independent audit. You must submit an independent accountant's report (IAR) with your final claim. Such reports may also be requested at other times.

Payments against the grant should be claimed quarterly in arrears on a disbursement basis, once you have defrayed the amount according to the profiles contained in your Grant Funding

Agreement and have provided the required reports and evidence to support your claim. Once audits and reports are complete and approved, the claimed funds will be released. You must provide evidence to support each claim made against the grant.

Claims must be paid into an account in the name under which you have applied. Your banking provider must have a clearing facility and must be authorised by the Prudential Regulation Authority (PRA) and regulated by the Financial Conduct Authority (FCA).

If your banking provider does not have a clearing facility, we can still accept it if it is not subject to sanctions and is authorised by the Prudential Regulation Authority (PRA) and regulated by the Financial Conduct Authority (FCA).

Even if BEIS has paid you grant payments before, we may request some further details. You can provide these alongside your signed Grant Funding Agreement.

7.4 Longer term Monitoring and Verification

Successful deployment projects will need to meet longer term monitoring requirements for a period of up to five years post project completion, or longer, where applicable, as agreed in the Grant Funding Agreement. Project completion is the point when you have installed and begun to operate (or are ready to operate) the technology.

Longer term monitoring comprises compliance monitoring and benefits monitoring (which also includes evaluation). Compliance monitoring is a continuation of the project set up monitoring, ensuring continuing compliance with the terms and conditions of the IETF. Benefits monitoring is intended to evaluate the longer-term success of project interventions in achieving their stated goals, and to inform the overall assessment of IETF as a policy intervention.

In exceptional and limited circumstances, projects may be granted extensions to project milestones. In such cases the length of the longer-term monitoring may be extended accordingly. This is explained further below.

7.5 Compliance Monitoring (Longer term)

All deployment projects will need to provide ongoing evidence that they have complied, and are continuing to comply, with the terms of the grant. Some deployment projects will also need to provide evidence of ongoing compliance with technology eligibility criteria. This data will usually need to be collected on a continuous basis and reported to BEIS every six months, for a period of up to five years after project completion. Such data reporting only applies for the specific technologies listed below. Full terms of the compliance monitoring regime will be agreed in your Grant Funding Agreement.

7.5.1 Biomass: Compliance monitoring

Projects must provide:

- Evidence to confirm alignment with schedule 3 of the Renewable Heat Incentive Scheme Regulations 2018, including information to demonstrate that the lifecycle greenhouse gas emissions associated with each consignment of biomass fuel are less than or equal to 34.8g of CO_2 per MJ of heat generated.
- Where applicable, receipts of purchase or unique identifiers that demonstrate the biomass fuel is being supplied from a sustainable source on either the Biomass Suppliers List or Sustainable Fuels Register.
- Evidence that the site holds all relevant environmental permits. Further monitoring requirements and obligations will be detailed in the Grant Funding Agreement.

Further monitoring requirements and obligations will be detailed in the Grant Funding Agreement.

7.5.2 Biogas and biomethane: Compliance monitoring

Projects must provide:

- Evidence to confirm alignment with schedule 3 of the Renewable Heat Incentive Scheme Regulations 2018, including information to demonstrate that the lifecycle greenhouse gas emissions associated with each consignment of biogas or biomethane fuel are less than or equal to 34.8g of CO_2 per MJ of heat generated.
- Receipts of purchase that evidence the source and supplier of the biogas or biomethane fuel.
- Evidence that the biogas or biomethane is either produced on-site or is being supplied to the industrial site through fixed infrastructure.
- Evidence that the site holds all relevant environmental permits.

Further monitoring requirements and obligations will be detailed in the Grant Funding Agreement.

7.5.3 Hydrogen: Compliance monitoring requirements and obligations:

Projects must provide:

- Receipts and data for hydrogen fuel bill purchases and fuel supply contracts, demonstrating the supplier and quantity consumed at site level (post fuel switch).
- Evidence that the site has an established connection to the distribution infrastructure of the proposed hydrogen supply (photographs, virtual or physical site inspections by IETF monitoring officers).

- Updated figures and evidence of the carbon intensity of the hydrogen fuel being used onsite.
- Information on any interim fuel being used (where applicable) including the fuel type, quantity used and fuel bill purchase receipts.

The following conditions also apply to hydrogen projects:

- Hydrogen projects must begin using the low-carbon hydrogen fuel identified in their application by the date stipulated in the application and subsequently agreed in the Grant Funding Agreement. This date must be within five years of project completion.
- Until such time as the fuel switch is made, projects will be required to provide the monitoring data, detailed above, relating to any interim fuel being utilised by the equipment.
- Once a site has completed the fuel switch to hydrogen, the monitoring information detailed above, relating to hydrogen, will need to be provided for the remainder of the five-year post project completion monitoring period.
- See the 'Deadline Extensions' and 'Long-term Monitoring Extensions' sections below for details of project milestone deadline and monitoring period extensions where your project experiences delays that are external and out of your control.
- Where a delay occurs, you will need to continue providing monitoring data relating to any interim fuels being used, up to the date at which the switch to hydrogen occurs or for the remainder of the five-year monitoring period.

7.5.4 CNG or LNG: Compliance monitoring

Projects must provide the following evidence:

- Receipts of purchase that demonstrate both the quantity of CNG or LNG being consumed and evidence the fuel is being supplied from an identified supplier.
- Evidence to demonstrate the lifecycle greenhouse gas emissions of the CNG or LNG.

  Evidence that the fuel is being transported to site through methods described in the application.

7.5.5 Carbon Capture: Compliance monitoring requirements and obligations

Projects must provide:

- CO_2 capture rate at point source
- CO_2 quality
- Quantity of CO_2 captured

- Purchase receipts evidencing the utilisation customer and the quantity of CO_2 purchased (if appropriate).
- Payment receipts to the distribution infrastructure operator and receipts demonstrating payment to the storage site including quantity of CO_2 stored (if appropriate).

The following conditions also apply to CCUS projects:

- CCUS projects must begin capturing CO_2 for utilisation or storage by the date stipulated in the application and subsequently agreed in the Grant Funding Agreement. This date must be within five years of project completion.
- Projects will only be required to provide the monitoring information detailed above from the date at which the site begins capturing the CO_2.
- Once a site has started capturing CO_2, the monitoring information detailed above will need to be provided for the remainder of the five-year post project completion monitoring period.
- See the 'Deadline Extensions' and 'Long-term Monitoring Extensions' sections below for details of project milestone deadline and monitoring period extensions where your project experiences delays that are external and out of your control.

7.6 Benefits Monitoring (longer term)

The IETF is committed to longer term monitoring and evaluation of the benefits of the scheme. In order to achieve this, successful deployment projects will be required to produce a benefits monitoring and verification plan (M&V Plan) and supply data in line with that plan for five years after the end of the project.

This plan must include:

- a methodology for calculating the current baseline energy consumption of the process via an appropriate measurable metric (e.g. natural gas consumption per tonne of product produced or MWh of electricity used in the process per year);
- a methodology for calculating the current baseline emissions of the process (excluding energy consumption);
- how you will monitor the benefits after the intervention, including but not limited to actual energy, emissions and bill savings;
- the methodologies you will use to verify the savings, including how changes in benefits data due to IETF (e.g. energy consumption, emissions, bill savings) will be isolated from other non-IETF changes to your production process that may occur during the reporting period;
- who will be responsible for measuring and verifying savings and on what timelines the data will be provided to BEIS.

Your M&V Plan will need to be in place before you can sign your Grant Funding Agreement with BEIS, on the basis of guidance provided by BEIS and approved by BEIS. If there are reasonable circumstances which means this cannot be achieved, we will consider these on a case-by-case basis. In such exceptional circumstances, where explicitly agreed with BEIS, the M& V Plan may be in place as soon as reasonably practicable, and in any event, no later than the first grant payment milestone. No payments against the grant will be made until the M&V plan is in place and provided to BEIS. If you are successful at the initial assessment stage, BEIS will provide further guidance when you are notified.

Your M&V plan must include baseline data against which the project performance will be measured. This plan will involve long-term monitoring of the performance of the intervention using your suggested methodology, which will be verified by technical monitoring officers appointed by BEIS. Your final plan is subject to approval by BEIS as it is imperative that it is fit for purpose.

The M&V plan must clearly identify how the data required by your methodology will be measured and collected, including the specific meters and their locations within the industrial process which will be used (see 'Metering Requirements' below). You will need to measure and provide all data specified by your methodology to BEIS no less than every six months (specific deadlines will be agreed within the M&V plan). BEIS will use this data for the purposes of evaluation of the IETF against its objectives. As part of your application, you must confirm that you are able to designate sufficient resources to longer term benefits monitoring and verification.

Applicants, including unsuccessful applicants, for either studies or deployment projects may be requested to participate in research to help BEIS evaluate the performance or delivery of the IETF. Successful applicants will be required to participate and are expected to constructively engage with evaluation activity, as this is an important for BEIS to deliver effective projects now and in the future. Evaluation research may include participating in a small number of interviews to inform evaluation reports, completing surveys or allowing the project to be used for case studies.

7.7 Deadline Extensions

For some projects, for example, fuel switching and carbon capture projects, there may be instances where you are unable to begin using the fuel identified in your application or to start capturing the CO_2 on the date proposed in your application. The cause of this delay could be due to external factors outside of your control. If your project experiences such delays and this renders you unable to meet specific project milestones, you will need to provide evidence to BEIS. We will decide whether an extension to the project timeline is justified. Extensions will only be granted where they remain within the five-year monitoring period after the intended project completion date.

Scenarios in which an extension to project deadlines might be granted may include, but are not limited to:

- Hydrogen fuel switching projects: Where your project is unable to start using the hydrogen fuel on the date agreed in your Grant Funding Agreement because of delays or issues with external hydrogen production and supplies or with fuel distribution infrastructure.
- Carbon capture, utilisation and storage (CCUS) projects: Where your project is unable to start capturing the CO_2 on the date agreed in your Grant Funding Agreement because of delays or issues with either the end user (utilisation projects), or the CO_2 transportation or storage infrastructure (storage projects).
- Other projects: Where your project experiences similar delays to external infrastructure and fuel supply, these could include unforeseen delays to external fuel production or fuel distribution.

Longer term monitoring extensions:

If your project is granted an extension to a project milestone, you will still be expected to provide the data required to comply with the long-term compliance and benefits monitoring for the remainder of the five-year post project completion monitoring period. If your project is granted an extension to a project milestone, you will still be expected to provide the data required to comply with the long-term compliance and benefits monitoring for the remainder of the five-year post project completion monitoring period.

If the extension granted for your project means the remaining length of the longer-term monitoring period is insufficient to provide assurance to BEIS that the project is complying with the conditions in the Grant Funding Agreement, BEIS reserves the right to extend this monitoring period beyond the five-year post project completion period.

The length of the extension to the monitoring period will be limited to the length of the extension granted by the IETF to your project milestone deadline. For example, if the IETF grant you a one-year extension to your project milestone date, then the length of time the IETF can extend the long-term monitoring period would be capped at one year.

8.0 Metering Requirements

In your application you will need to outline what metering equipment you have in place or plan to install as part of your project, to meet your longer-term compliance and benefits monitoring obligations as set out above. The type of equipment will depend on the technology you are using and the associated information that you are required to provide.

If you do not have sufficient metering equipment already, you will need to install appropriate equipment at point-of-use (be it a production line, process, installation, or site which is benefitting from the intervention). Ideally the equipment should remain the same between the baseline period and the monitoring period. Successful applicants will be required to have a digital meter able to communicate data on use and consumption remotely.

You will need to outline any metering requirements as part of your application. Metering equipment is considered an eligible cost and you may therefore include it in your application for grant funding. However, any additional metering requirements will need to be justified in your application, with reference to currently installed systems and why these are not sufficient.

9.0 Knowledge Sharing

You will be expected to disseminate information on the results of your project, building on the information provided in your application. During your project and after completion, you may be asked to attend IETF promotional events and keep us updated on any knowledge sharing activities that you undertake. You must also consent to produce a case study for knowledge sharing during your project and on project completion. It will be made publicly available so should not include any commercially sensitive information. Your information may also be used to create and maintain a register of grant recipients.

10.0 Data Sharing Policy

Please read our Privacy Policy so you are aware of the ways in which we will use and store your personal data. Please read our Privacy Notice so you are aware of the ways in which we will use and store your personal data. When you apply, you will be asked to confirm that you have read and agreed to the policy.

All other data provided as part of your application, and (for successful projects only) generated throughout the assessment, project delivery, or 5-year monitoring period, may be shared by BEIS with contractors, other government departments and/or the devolved administrations for purposes including, but not limited to, assessment, monitoring, research and evaluation. This data may also be linked to other datasets and/or used to publish anonymised and/or aggregated statistics. BEIS may conduct research itself or share this data with appropriately qualified evaluation subcontractors.

Annex A: Technological Eligibility

This annex outlines the technological eligibility criteria that your project must meet to be eligible for grant funding from the Industrial Energy Transformation Fund (IETF). Applicants should note that the eligibility criteria set out here apply to applications for both studies and deployment projects, unless stated otherwise. The criteria detailed below only covers the eligibility of a project's chosen technological solution and applicants must read the full applicant guidance document to understand whether your project is eligible for IETF funding.

A. Energy Efficiency Technologies

Energy efficiency technologies identified as within the scope of the IETF will be supported as either a study (feasibility or engineering) or deployment project. Below are examples of the solutions and technology types that are within the scope of the energy efficiency competition strand (but this is not a comprehensive list).

- **Process optimisation**
    - Industrial process control systems (for example: discrete controllers, distributed control systems, SCADA systems and programmable logic controllers) that measure, monitor and control equipment within an industrial process to improve energy efficiency.
    - Individual controllable equipment within an industrial process that also improve energy efficiency (for example asynchronous drive motors).
    - Higher efficiency heat exchange, where the transferred heat is used within an industrial process on site.
- **Equipment upgrades**
    - More efficient driers, ovens, kilns (including the use of microwave and infra-red heating where this is more efficient).
    - More efficient combustion equipment, including installation of hydrogen ready boilers where there is an efficiency improvement.
- **Heat and energy recovery and heat pumps**
    - Heat pumps that provide energy in the form of heat or cooling to an industrial process, where the heat is sourced from the natural environment.
    - Energy recovery from waste heat produced in an industrial process, using heat pumps, where the energy is utilised in an industrial process on site.
    - Energy recovery from waste heat produced in an industrial process where the energy is utilised in an industrial process on site.
    - Energy recovery from waste pressure produced in an industrial process where the energy is utilised in an industrial process on site.

  - Installation of equipment to generate electricity using waste heat, waste pressure, waste process gas, or waste process liquid not suitable for transport use, where this electricity is used to power on-site industrial processes.

- **Resource efficiency measures**
  - Onsite resource efficiency measures to reduce wastage and optimise use of raw materials. For example, the IETF could provide support towards the costs of adapting processes to new input materials that require less energy to process.
  - Further eligibility rules for specific technologies are elaborated below.

A.1. Heat Pumps

The IETF will support the installation of heat pumps where these either:

- recover waste heat from the industrial process and utilise this waste heat in another industrial process(es) onsite; or
- where the heat pump sources heat from the natural environment to be used in an industrial process(es) onsite. This can include geothermal technologies.

Heat pumps, where the heat is sourced from the natural environment, must achieve appropriate performance across the year to meet the proposal's objectives. Applicants should evidence that the heat source and design of the heat pump meets this condition in their application.

A.2 Heating and cooling equipment

The IETF will support the installation of more efficient heating and cooling technologies within industrial processes and sites where the heating or cooling is directly related to the industrial equipment being used.

- As an example, increased use of waste heat to pre-heat a feed stream would be eligible under the IETF.
- Cooling technologies for **data centres** that refrigerate the space between the equipment components and internal surface of the immediate insulating structure would also be in scope.
- **Refrigeration technologies** for the cold storage of products on industrial sites or cooling technologies necessary to the industrial process equipment itself are in scope, while space heating of warehouses or site buildings would not be eligible.

A.3 Fuel switching

Applicants may apply for support to investigate or carry out a fuel switch at their site. Fuel switching is only permitted where this is to a lower carbon fuel and in most instances, we would anticipate that decarbonisation would be the primary outcome of the project. Projects where energy consumption reduction, achieved because of the installation or retrofitting of more efficient industrial equipment, is the primary benefit of the project are however permitted to apply as an energy efficiency project, this is limited to the following fuel switches:

From	To (specific requirements apply for each fuel)
Any Fuel	Electricity
Fossil fuels more carbon intensive than the gas grid (e.g., coke, coal, oil)	Gas grid

See the decarbonisation section below for full fuel switching rules. Applicants should note that the maximum funding available for deployment projects differs depending on whether your proposal is entered into the energy efficiency or decarbonisation strand of the competition.

B. Decarbonisation technologies

Decarbonisation technologies identified as in scope of the IETF will be supported as either a study (feasibility or engineering) or deployment project. The list below provides examples, but not a comprehensive list, of the solutions and technology types that are in scope of the deep decarbonisation competition strand.

- Fuel switching, where the switch is to a lower carbon intensity fuel that is also not a higher carbon intensity than the gas grid (see fuel switching section below), including:
    - Electrification of industrial processes
    - Retrofits and upgrades of industrial equipment to use hydrogen or hydrogen blends.
    - Retrofits and upgrades of industrial equipment to use natural gas sourced from the National Grid.
    - In certain circumstances, retrofits and upgrades of industrial equipment to use biomass or biogas and biomethane.
    - In certain circumstances, retrofits, and upgrades of industrial equipment to use compressed natural gas or liquid natural gas in place of other, more carbon intensive fossil fuels.
    - In certain circumstances, retrofits, and upgrades of industrial equipment to use waste fuels.
- Onsite changes or adaptations required to incorporate carbon capture technology for utilisation or storage.

Eligibility rules for each technology type are further elaborated below.

B.1 Fuel Switching

The IETF will support fuel switching studies or deployment projects as a decarbonisation measure where it can be demonstrated that the outcome of the switch delivers emissions reductions associated with an industrial process. Studies or deployment projects for fuel switching involving Combined Heat and Power (CHP) plants are included in this definition (see further guidance below).

Fuel switching is only permitted in instances where the switch is to a less carbon intensive fuel. Carbon intensities for most fuels are provided by the greenhouse gas reporting guidance, see the 'Fuels' or 'Bioenergy' worksheets (conversion factors 2021: full set). If your intended fuel is not included in the guidance, you will be asked to provide a value for the carbon intensity of the fuel and explain how this was derived. The gas grid is used as a benchmark for acceptable fuel switches (unless your site does not have gas grid connection), such that you cannot switch to a fossil fuel that is more carbon intensive than the gas grid.

Fuel combustion proposals must be above 1MWth input and comply with UK air quality regulation.

Table 1: Eligible decarbonisation fuel switches

From	To (specific requirements apply for each fuel)
Any Fuel	Electricity
Fossil fuels	Waste energy
Fossil fuels	Waste fuel
Fossil fuels	Biomass where the applicant can justify the reason for switching to this fuel over other decarbonisation fuel switching options within scope of the IETF.
Fossil fuels	Biogas or biomethane and compressed or liquified natural gas on sites that are remote from the gas grid
Fossil fuels more carbon intensive than the gas grid (e.g. coke, coal, oil)	Gas grid
Fossil fuels	Hydrogen

B.2 Partial fuel switching and fuel blending projects:

Where applicants are considering a partial fuel switch, the switch from the original fuel to the new fuel must comply with the fuel switching eligibility criteria set out in this guidance.

Where applicants are considering a blend of fuels, the new fuel mix must comply with the fuel switching eligibility criteria and rules set out in this guidance document. The resulting fuel mix must have a lower carbon intensity than that of the previous fuel or fuel mix.

B.3 Scope of fuel switching support:

The IETF can provide financial support towards the costs of on-site changes necessary to facilitate the fuel switch in the industrial process. This includes but is not limited to:

- The costs of retrofitting equipment or installing new equipment which can operate using the new fuel.
- The cost of upgrading on-site transformers or onsite costs of enabling connection to offsite fuel distribution infrastructure.
- Connecting pipes and infrastructures (such as fuel or energy storage facilities) within the industrial site where necessary to achieving the outcomes of the project.
- Where required and to be owned by the lead applicant, the IETF will support onsite fuel processing equipment to change the physical properties of a fuel to a state suitable for combustion such as compressors or blenders, but the IETF will not fund any equipment associated with the production of fuels (such as reactors or anaerobic digestors).
- Metering equipment, where required to provide data in accordance with the monitoring and verification (M&V) plan or for compliance monitoring processes (see metering section in the general guidance document).

The IETF will not provide financial support towards any changes required for the fuel switching that occur off-site. The costs of purchasing, installing, and maintaining renewable electricity generation equipment, such as solar panels, will also not be covered by the IETF.

B.4 Combined Heat and Power (CHP) fuel switching projects

New or retrofit CHP proposals will be supported only where this involves an eligible fuel switch as per the scenarios in Table 1 and in line with the eligibility requirements of the chosen fuel as outlined in this document. Notably, where biomass is used, the heat output from the CHP project must be used in high temperature applications in which the operational temperature of the industrial process(es) being heated is equal to or more than 240°C.

In some cases, CHP equipment integral to the process may not be owned by the lead applicant or may not be co-located on the immediate site. Studies or deployment projects involving eligible fuel switches for CHP plants will be considered in scope provided that at least 70% of both the heat output and electricity output produced by the CHP plant is used for an eligible process by the lead applicant or project partners. The lead applicant must in this

case be an eligible end-user, and the CHP operator must be a collaborating partner on the project. If these conditions are met, then the IETF can support the costs of fuel switching studies or deployment projects at the identified plant.

B.5 Waste fuel switching projects

There are many types of waste streams which can be used as a fuel source, some may overlap with categories of biomass fuels. Where the waste fuel is biological in origin, the proposal must comply with the biomass eligibility criteria. Examples of waste fuels include, but are not limited to:

- Refuse Derived Fuel (RDF) and Solid Recovered Fuel (SRF)
- Combustible waste gases such as blast furnace gas (BFG) and coke oven gas (COG) in steel making; these off-gas have a calorific value and are hence a fuel.
- Waste from food production.

Applications for projects that involve switching towards waste fuels will be supported in situations where:

- Applicants can justify the reason for choosing waste fuel over other decarbonisation fuel switching options within scope of IETF funding.
- The waste fuel is sourced from the lead applicant's site or process(es).
- Applicants can justify why this is the best use of the waste product, including whether there are better alternatives such as waste minimisation.
- The project involves a switch away from an original fuel with a higher carbon intensity than the proposed waste fuel.

Applicants must demonstrate that there are life-cycle emissions savings from the fuel switch and comply with the biomass rules below as appropriate.

Proposals that do not meet all the requirements above will not be eligible for funding.

The IETF will support industrial sites to fuel switch to electricity or cleaner heat sources, including where this energy is supplied by an Energy from Waste plant. We will not support projects related to energy from waste facilities themselves.

As part of the assessment process waste fuel switching projects will be asked to:

- **Explain the source of your waste fuel including details of the onsite process the waste originates from and a breakdown of the types of waste(s) that make up the waste fuel.**

B.6 Biomass fuel switching projects

Where biomass is the decarbonisation technology of choice, applicants will need to justify the reasons for choosing biomass over other alternative decarbonisation fuel switching options

within scope of IETF funding. This justification could include an explanation that the industrial site does not have access to local gas or electricity grid infrastructure, and it is therefore unfeasible to establish a connection, or evidence the capacity of the local electricity grid infrastructure is insufficient to meet the needs of the industrial site. A policy statement outlining the Government's view on the role of sustainable biomass for net zero can be found here.

The IETF considers biomass proposals where these relate to virgin biomass or residues. Examples of fuels that meet this definition and are considered eligible feedstocks for IETF grant funded biomass projects include but are not limited to:

- Wood logs, chips, and pellets
- Straw and agricultural residues
- Paper and pulp residues from the paper manufacturing process
- Biomass residues from the food processing industry

When referring to biomass, we mean the fuel is, or is derived from, the material in the above definition. The IETF does not support projects which will convert biomass to biofuels for later use or to upgrade to biomethane for injection into the gas grid.

The following eligibility criteria apply to both study and deployment projects, applications should note that deployment projects will be asked to evidence their compliance. Applications for projects that involve switching towards virgin biomass or residues will be supported in situations where:

- the project involves a switch away from an original fuel with a higher carbon intensity than the proposed biomass fuel.
- the output from the biomass combustion is used in high temperature applications in which the operational temperature of the industrial process or processes being heated is equal to or more than 240°C.
- you can prove and evidence that the biomass feedstock to be used as fuel will be sourced from a supplier on either the Biomass Suppliers List (for woody biomass) or the Sustainable Fuel Register (for non-woody biomass) or demonstrate the biomass feedstock is in compliance with Schedule 3 of the Renewable Heat Incentive Scheme Regulations 2018.
- the biomass will be utilised in an existing heat/energy use where it is replacing a need previously supplied by a more carbon intensive fuel.
- The source of the biomass considered is sustainable. The application will need to show that the biomass fuel used will deliver greenhouse gas reductions and will not result in adverse environmental impacts such as air pollution or soil erosion, through compliance with existing local and national environmental regulation and biomass sustainability criteria. The required biomass sustainability criteria are those used in Schedule 3 of the Renewable Heat Incentive Scheme Regulations 2018.

- you can prove and evidence at project completion that the project is in compliance with and therefore holds any necessary environmental permits in relation to the biomass combustion plant, and will continue to comply with all local and national laws relating to the protection of the Environment.

Proposals that do not meet all the requirements above will not be eligible for funding.

If you are considering switching away from an existing fuel to biomass with carbon capture, (bioenergy with carbon capture and storage, BECCS), please select this as your technology choice when completing the application. We will still require you to meet the biomass criteria above to demonstrate that your project represents a “best use” case for the fuel. You will also be asked questions relevant to carbon capture technologies (see section B.11). Please ensure you have adequately described and quantified the emissions and energy impacts of the switch in your application. In the project Benefits Calculator please fill in tab 6 to describe the direct emissions abatement (carbon captured) from the project as well as the details around the pre and post intervention fuels. Biomass proposals will be subject to ongoing post-project completion monitoring requirements that will be detailed in the Grant Funding Agreement.

As part of the assessment process biomass fuel switching projects will be asked to:

- **Explain the source of your biomass, including why it was chosen and how it will be supplied to the site.**

B.7 Biogas and biomethane fuel switching projects at off gas grid sites

If the site is not on the regional or national gas grid, switches to biogas and biomethane combustion or combined heat and power projects are permitted for consideration. In this case the biogas or biomethane must be sourced from a dedicated supply that could not otherwise be injected into the gas grid.

The supply must be based onsite or transported to site through fixed infrastructure (for example pipelines). The IETF will not provide financial support towards the costs of installing or maintaining off-site infrastructures, or towards biogas and biomethane production plants. Applications for projects that involve switching towards biogas or biomethane will be supported in situations where:

- The project involves a switch away from an original fuel with a higher carbon intensity than the proposed biogas or biomethane fuel.
- The biogas or biomethane fuel considered must be sustainable. The application will need to show that the biogas fuel used will deliver greenhouse gas reductions and will not result in adverse environmental impacts such as air pollution, through compliance with existing environmental regulation and biogas sustainability criteria. The required sustainability criteria are those used in Schedule 3 of the Renewable Heat Incentive Scheme Regulations 2018.

- The site must be able to prove and evidence at project completion that the project is in compliance with and therefore holds any necessary environmental permits in relation to the biogas or biomethane combustion plant and will continue to comply with all local and national laws relating to the protection of the Environment.

Fuel switches to biomethane are also in scope and must adhere to the same eligibility requirements as biogas projects, these are detailed above. In such circumstances, the biomethane must be supplied from a source where it is not possible to inject the biomethane into the gas grid. Applicants will need to provide a justification for this in their application.

If you are considering switching away from an existing fuel to biogas or biomethane with carbon capture, (bioenergy with carbon capture and storage, BECCS), please select this as your technology choice when completing the application. We will still require you to meet the biogas and biomethane criteria above. You will also be asked questions relevant to carbon capture technologies (see section B.11). Please ensure you have adequately described and quantified the emissions and energy impacts of the switch in your application. In the project Benefits Calculator please fill in tab 6 to describe the direct emissions abatement (carbon captured) from the project as well as the details around the pre and post intervention fuels. Biogas and biomethane proposals will be subject to ongoing post-project completion monitoring requirements that will be detailed in the Grant Funding Agreement.

As part of the assessment process biogas and biomethane fuel switching projects will be asked to:

- **Explain the source of your biogas or biomethane, including what feedstock will be used to produce it, how it will be supplied to the site, and why injection into the gas grid from the source would not be feasible.**

B.8 Synthetic fuels

The gas grid is used as a benchmark for acceptable fuel switches (unless your site does not have gas grid connection), such that you cannot switch to a fossil fuel that is more carbon intensive than the gas grid. Synthetic fuels derived from the gasification of solid feedstocks will typically not meet this condition. Specifically, the below **fuels would not be eligible**:

- Grey hydrogen (steam reforming of natural gas or liquid hydrocarbons to produce hydrogen). This can be used temporarily for testing purposes, see Hydrogen section for details
- Gasification of coal
- Gasification of biomass (permitted as an eligible fuel for off gas grid sites only)
- Gasification of waste (permitted as an eligible fuel for off gas grid sites only).

B.9 Compressed or liquified natural gas fuel switches at off grid sites:

If the site is not on the regional or national gas grid, switches to compressed natural gas (CNG) and liquified natural gas (LNG) combustion are permitted for consideration. Where CNG or LNG is the decarbonisation technology of choice, applicants will need to justify the reasons for choosing these fuels over other alternative decarbonisation fuel switching options within scope of IETF funding.

The CNG or LNG fuel is permitted to have a carbon intensity above natural gas from the regional or national gas grid but is only eligible where the project involves a switch from a fuel of higher carbon intensity than the proposed CNG or LNG (see conversion factors 2021: full set for emissions figures).

As part of the assessment process CNG and LNG fuel switching projects will be asked to:

- **Explain the source of the compressed or liquid natural gas fuel, including how it will be supplied to the site.**

B.10 Hydrogen fuel switching projects

The IETF will support fuel switching to low-carbon hydrogen, defined for the purposes of this competition as having an emission intensity equal to or below that of the gas grid. The Government will publish details of a low carbon hydrogen standard in 2022. The consultation on the low carbon hydrogen standard can be found here, this has now closed and we are reviewing the responses..

Fuel switches to low-carbon hydrogen will be supported where these involve either a switch to 100% hydrogen fuel or a blend of hydrogen and other fuels.

Projects aiming to install hydrogen ready equipment without plans to switch to hydrogen fuel are not eligible as hydrogen fuel switching projects, but ahead of hydrogen supplies coming online, may consider:

- Applying as an energy efficiency project if they result in energy savings.
- Applying as a decarbonisation project where there is a fuel switch from a more carbon intensive fuel for example to the gas grid

Applications for projects (studies or deployment) that involve switching towards hydrogen fuel will be eligible in situations where:

- The project involves a switch away from an original fuel with a higher carbon intensity than the proposed hydrogen fuel.
- The identified hydrogen supply must be low carbon, defined for the purpose of this application window as equal to or lower carbon intensity than the gas grid.

- If a deployment project, the fuel switch to hydrogen will occur within 5 years after the project completion date.

Hydrogen Studies:

Applications for hydrogen studies must include realistic, economically planned hydrogen supply options and where possible include estimates of the cost of supply as part of its economic assessment. Where the project is dependent on the development of off-site hydrogen supply networks, for example in a cluster setting, the applicant can note any core planning assumptions that have been made.

The scope of the study should focus on any feasibility or pre-engineering work required to invest in onsite equipment related to the industrial process.

Hydrogen Deployment Projects:

Applications for hydrogen fuel switching deployment projects must include detailed information about the proposed hydrogen supply. Applicants must demonstrate a realistic plan to begin utilising the identified hydrogen supply within 5 years after project completion and any key risks associated with the project. Applicants should note that the information provided in the application form related to these areas will be used by assessors to make a judgement on the viability of the project's proposals. Your application should include information covering the following areas:

- The expected date of supply availability at the site.
- Details of the proposed hydrogen fuel production method, quality, and supplier.
- Details of the hydrogen fuel distribution method and associated infrastructure requirements including any planning assumptions. This evidence should include information on the proposed construction milestones, completion date, any contracts or provisional agreements in place, any studies that have been conducted and the location of the off-site hydrogen distribution infrastructure.
- Applicants should note that evidence of previous hydrogen fuel switching FEED or feasibility studies at the site can be submitted to support the application, with brief summaries of findings welcomed.
- Where a project intends to blend hydrogen with another fuel, applicants must provide details including a breakdown of the fuel mix, and the percentage of hydrogen in relation to the overall mix.
- Applicants should expand on any dual fuel or back up fuel requirements that might be needed to mitigate against any risk of low or inconsistent hydrogen supplies.

As part of the assessment process hydrogen fuel switching deployment projects will be asked to:

- Provide details of the back-up or dual fuel the site proposes to use as part of the project, and why this has been chosen. Where this is compressed natural gas or liquid natural gas, provide evidence the site is off the gas grid. Provide details on how often you expect that you will have to utilise the back-up fuel.

- Provide details on how and where your hydrogen will be produced, including evidence that it will have a carbon intensity that is equal to or lower than gas from the regional or national gas grid.
- Outline any planning assumptions and infrastructure requirements for sourcing your hydrogen, including when the production facility is expected to be operational, and where this is offsite how it will be supplied to your site. Provide evidence that your project will begin utilising hydrogen no later than 5 years after the project completion date.

Hydrogen: Interim Fuels

Hydrogen fuel switching projects are permitted where the applicant can demonstrate the fuel switch will be completed within 5 years of project completion. Temporary interim fuels are therefore permitted to be utilised at the site until the low carbon hydrogen supply is available, up to a maximum of 5 years after the project completion date. The following fuels are permitted on an interim basis:

- Grid gas: Sites with access to the national or regional gas grid are permitted to use grid gas.
- Compressed natural gas or liquified natural gas: Sites without access to the gas grid are permitted to use these fuels.

Applications intending to use an interim fuel will need to provide information in their application about the carbon intensity of the fuel and the period of time you intend to utilise it. Where the supply of low carbon hydrogen is delayed, and a site needs to extend the period of time you use the interim fuel, applicants would need to provide evidence to BEIS to justify the extension. The IETF holds the right to grant an extension to this period on a case-by-case basis.

Grey hydrogen, defined here as hydrogen produced using fossil fuels without CCUS, is not permitted as an interim fuel. However, it may be permissible to allow the temporary use of grey hydrogen for testing purposes to ensure the equipment meets performance and safety requirements. Applicants will need to evidence that reliance on grey hydrogen supplies is minimised to short term usage for the purposes described and be limited to a 6-month testing and demonstration period. Applicants will need to provide a justification in their application for the length of time you require for testing and demonstrating. Where an applicant needs to extend the testing and demonstration period beyond 6 months, the rationale for this will need to be explained and evidenced to the IETF. The IETF will treat each request for an extension on a case-by-case basis.

Hydrogen fuel switching applicants to note:

Applicants applying for grant funding towards hydrogen fuel switching studies or deployment projects should note that success in this scheme does not constitute qualification for future hydrogen support from other Government programmes. Additionally, applicants should be aware that success in the IETF does not prevent the site from being required to adhere to future hydrogen fuel standards and associated regulations published in the future. This means that the IETF's definition of low carbon hydrogen described in this guidance is not a legal

definition and that applicants apply at their own risk. Success in this scheme does not remove the responsibility on applicants to adhere to future hydrogen emission standards.

B.11 Carbon capture utilisation and storage (CCUS) projects

The IETF can support both studies and deployment projects that involve retrofits and upgrades of industrial equipment or other onsite changes (for example, onsite connections to an offsite CO_2 transportation network) essential to facilitating onsite carbon capture technology. Carbon capture projects are only eligible where it can be evidenced that the captured CO_2 will be utilised either onsite or offsite, or where it is transported and stored permanently. The intended or achieved outcome of these projects must involve a reduction in carbon emissions associated with an eligible industrial process.

Grants will be offered towards the cost of any capital investment required within the boundaries of the site, including for example:

- Retrofitting carbon capture technologies onto existing industrial equipment including onsite bioenergy combustion (BECCS), anaerobic digesters, and CHP where these are powering onsite processes.
- Intermediate CO_2 storage and transport infrastructure (for example storage tanks and pipes) within the boundary of the site.
- Metering equipment to monitor the quantity and quality of the captured CO_2.

To be eligible for IETF grant funding, a proposal must:

- Consider incorporating carbon capture technology on an existing eligible industrial process at an existing eligible site
- Begin capturing the CO_2 for utilisation or storage within 5 years after the project completion date.

The following types of projects are not within scope and will not be eligible for IETF grant funding:

- Direct air capture technologies.
- Development of test centres for CCUS technology
- The setup of new end users of the captured CO_2 such as synthetic fuel manufacturers or mineralisation plants.
- Offsite transport and storage networks.
- Long-term storage infrastructure
- Projects with no identified utilisation or transport and storage routes for the captured CO_2.
- Projects proposing to transport the captured carbon to storage sites where the storage is temporary rather than permanent.

If your proposal is successful in the IETF competition, you are not permitted to claim support from other funds, such as the Carbon Capture and Storage Infrastructure Fund for the same set of eligible costs. Any assessment of projects for IETF funding decisions are for IETF purposes only and will not be used for decisions made as part of the CCUS cluster sequencing process.

Carbon Capture Studies:

Applications for carbon capture studies must identify a realistic, economically planned CO_2 route and where possible include estimates of the energy and carbon costs of moving CO_2 to the storage or utilisation site as part of its economic assessment. Where the project is dependent on the development of off-site transportation and storage networks, for example in a cluster setting, the applicant can note any core assumptions that have been made.

The scope of the study should focus on any feasibility or pre-engineering work required to invest in onsite equipment related to the industrial process. Proposals to incorporate carbon capture on CHP plants (including outside of the immediate site boundary) are eligible provided that at least 70% of the heat and power output is used within an eligible industrial process owned by the lead applicant or lead applicant and project partners.

Carbon Capture Deployment Projects:

Applications for carbon capture deployment projects must include detailed information about the proposed CO_2 utilisation or transportation and storage route. Applicants must demonstrate a realistic, economically planned route to begin capturing and utilising or permanently storing the captured CO_2 within a maximum of 5 years after the project completion date. Including clear plans of how you will integrate with the identified CO_2 transportation network.

Applications for deployment projects that involve incorporating carbon capture equipment will be eligible for support where:

- the captured CO_2 will be utilised, or where;
- the captured CO_2 will be transported through fixed (pipeline) infrastructure and stored permanently.
- applicants for deployment projects can evidence a credible and realistic plan for the site to begin utilising or storing the captured CO_2 within 5 years after the project completion date, through methods identified in the application.
- there is no eligibility requirement on the minimum capture rate of the technology deployed. However, to avoid the lock-in of technologies that are not aligned to net Zero we would typically expect rates to exceed 85%.[7]

Grants will only be offered towards the cost of capital investment required within the of the boundaries of the eligible industrial site.

[7] We define capture rate as the percentage of CO_2 emissions captured from the specific emissions stream, point source, that the capture technology is applied to. The eligibility requirements of the Industrial Carbon Capture business model support require projects to demonstrate the ability to achieve at least an 85% capture rate.

Where a site fails to start capturing the CO_2 on the date agreed in the Grant Funding Agreement due to factors outside of the applicants' control, and the site needs to extend the period of time until they begin capturing the CO_2, applicants would need to provide evidence to BEIS to justify the extension. BEIS holds the right to grant an extension to this period on a case-by-case basis.

The following additional information will be requested as part of the application process and will be used in the assessment process. Applicants should note that the information provided in the application form related to these areas will be used by assessors to make a judgement on the viability of the projects proposals. Your application should include information covering the following areas:

- Capture rate (efficiency) of the total CO_2 content of the flue gas or similar.
- Quantity and quality of the captured CO_2.
- Carbon capture and utilisation proposals should identify the off taker utilising the captured CO_2 including, provisional sales agreements, and the type of industrial process the captured CO_2 is being used in, method of transporting the captured CO_2 to the utilisers site.
- For carbon capture and storage projects, the proposed fixed (pipelines) CO_2 transportation infrastructure including location, plans for establishing a fixed connection to the site, construction milestones, date of availability, evidence of provisional agreement with the CO_2 transportation and storage business(es), any other relevant planning assumptions.
- For carbon capture and storage projects, the CO_2 storage site including evidence that it will store the captured carbon permanently, storage method, provisional agreements with the transportation and storage business, facility construction milestones, date of availability, evidence the transportation infrastructure is connected to the proposed storage site.

As part of the assessment process carbon capture deployment projects will be asked:

- **Where a project is proposing to utilise the captured CO_2, explain and provide evidence for how the end user is currently sourcing the CO_2 required in their process.**
- **Where a project is proposing to utilise the captured CO_2, explain and provide evidence for how the end user will use the captured CO_2. If it will end up in a product, provide details on how long the CO_2 is expected to be stored within that product.**
- **Where a project is proposing to utilise the captured CO_2, provide evidence that the site will begin capturing and utilising the CO_2 within 5 years of project completion.**
- **Where a project is proposing to transport and permanently store the captured CO_2, provide details of the transport and storage network that your project will be**

connecting to, and evidence that the site will begin capturing, transporting and permanently storing the CO_2 within 5 years of project completion.

- **In the benefits calculator you are prompted to include an estimate of the direct emissions abated in tab 6.**

This publication is available from: https://www.gov.uk/government/publications/industrial-energy-transformation-fund-ietf-phase-2-spring-2022

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