

# Industrial Energy Transformation Fund



**Catherine Barber**

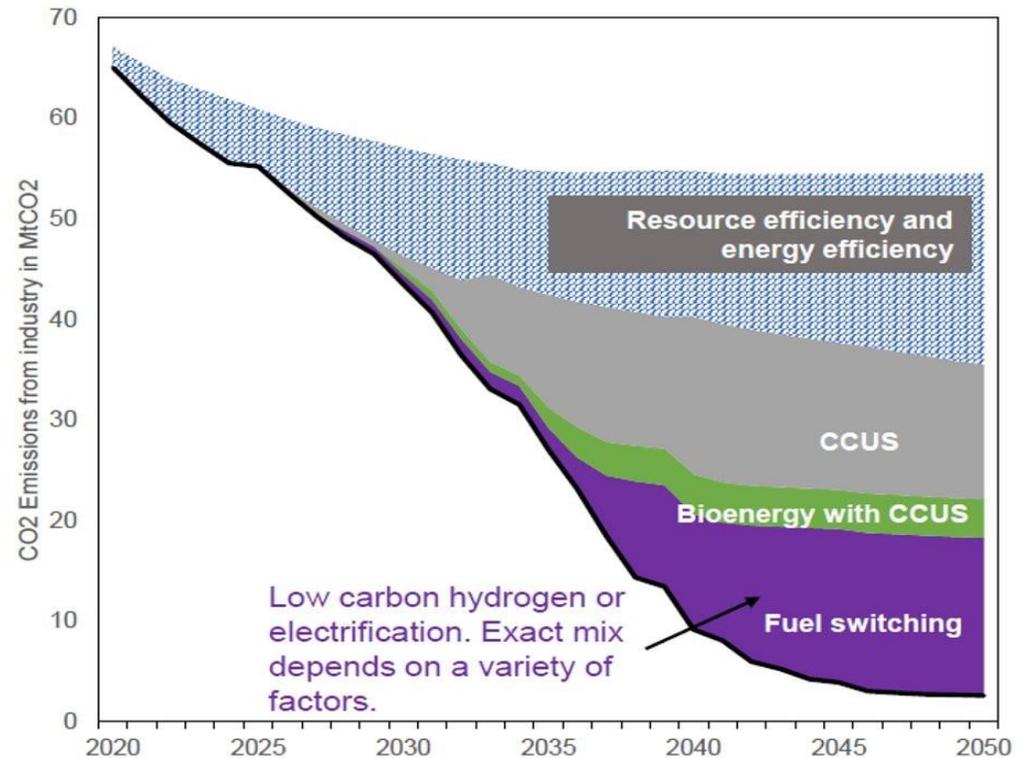
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(BEIS)



Department for  
Business, Energy  
& Industrial Strategy

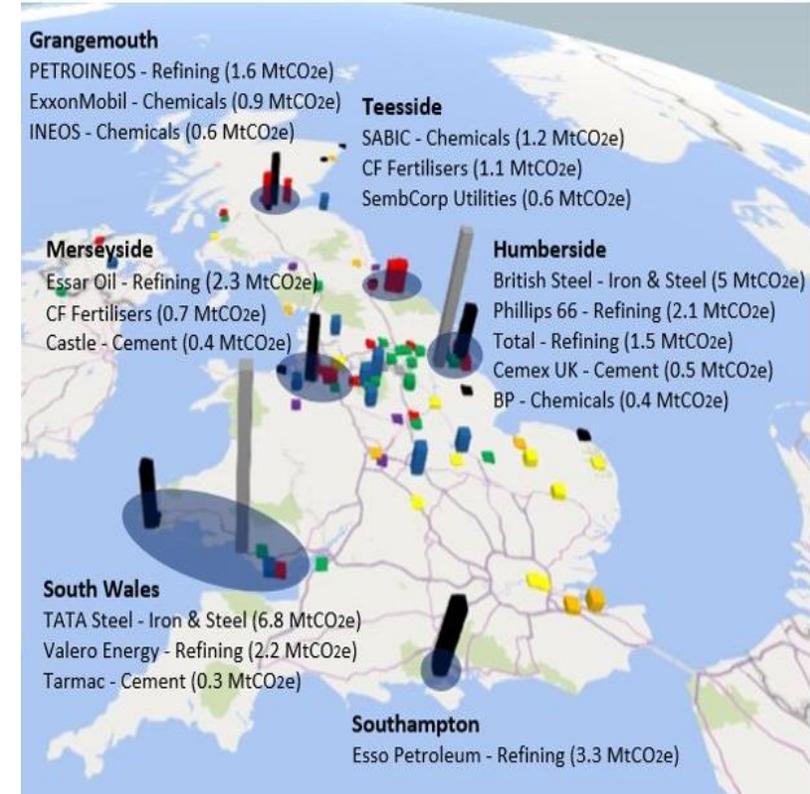
# Net zero industry

- Industrial emissions account for around 16% of UK emissions  
By 2050 they need to fall by around 90% from today's levels
- In December 2020 the Government published the Ten Point Plan for a green industrial revolution and an Energy White Paper.
- The documents set out our ambition to build back better, support green jobs, and accelerate the UK's path to net zero.



# UK Government action on Industrial Decarbonisation

- 1 Investment and policy design:** Government offers support from research, development and innovation to demonstration and deployment of clean technology.
- 2 Industrial Clusters Mission:** The UK has a mission to support the delivery of four low carbon clusters by 2030 and at least one full net zero cluster by 2040.
- 3 Market Building:** BEIS is committed to carbon pricing. We have just launched the UK Emissions Trading Scheme
- 4 Listening:** We recently published our response on CCUS Business Models and will soon be publishing our Industrial Decarbonisation Strategy.

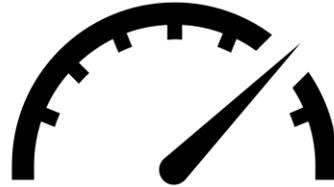


# What will enable industry to reach net zero?

*Industry and government will need to work closely together to achieve our goals.*



- Rapid and early deployment of low carbon technologies
- CCUS and hydrogen will be the key technologies in reaching net zero.



- Continue reducing fossil fuel consumption
- Continue to improve resource and energy efficiency



- Industry and government will need to work closely to reach net zero
- Enhance collaboration between industry and share learning

# Industrial Energy Transformation Fund

Two objectives:



Reduce energy costs and emissions for industry



Bring down costs and risks of deep decarbonisation technologies by demonstrating those technologies

- The IETF is targeted at industrial processes, helping to reduce energy use and emissions at manufacturing sector and from data centres.
- The fund is open to businesses of any size registered in England, Wales or Northern Ireland.

# Delivering the IETF



- BEIS will deliver the Spring 2021 window in partnership with Innovate UK who will manage the application process itself.
- The IETF is a competitive fund. Bids will be assessed and compared.
- Innovate UK and KTN can help you with any application questions.
- If you have a site in Scotland you can apply through the Scottish IETF, our sister scheme, delivered by the Scottish Government.

# IETF funding and competition windows

The IETF will allocate £289m in England, Wales and Northern Ireland out to 2024

	Phase 1: Summer 2020	Phase 1: Spring 2021	Phase 2 windows
<b>Value</b>	<b>39 awards offered, totalling £31 million</b>	Up to £40m	Remainder of the Fund
<b>Timeframe</b>	Closed Oct 2020	<b>8<sup>th</sup> March - 14<sup>th</sup> July 2021</b>	Opens 2021
<b>Scope of deployment strand</b>	Energy efficiency	Energy efficiency	Energy efficiency <b>and deep decarbonisation</b>
<b>Scope of studies strand</b>	Energy efficiency and deep decarbonisation	Energy efficiency and deep decarbonisation	Energy efficiency and deep decarbonisation

# IETF Phase 1: Summer 2020 competition winners

- The competition window ran from 20 July to 28 October 2020
- 39 applications have been approved for funding totalling around £31 million subject to due diligence checks. Further announcements will be made in due course.
- The projects represent a good spread across geographical regions, sectors, technologies, and size of companies. Manufacturing sectors include food and drink, steel, paper, and pharmaceuticals.
- Project locations span England, Wales, and Northern Ireland. Regions in England receiving funding include the East and West Midlands, North East, North West, and Yorkshire and the Humber.

# IETF scope

The IETF has a broad remit in terms of sectors and technologies, and eligibility rules are guided by the following principles:

1. Projects should demonstrate that they will reduce energy use and/or carbon emissions from existing industrial processes;
2. Projects need to align with our net zero goal for 2050;
3. This is a transformation fund – we will not support projects where there is already Government support, or where equipment is well-established and affordable.

We have taken a **technology neutral** approach. Our guidance sets out some specific eligibility requirements.

# Preparing your application

- Applicant guidance is available online and we recommend you read it before starting an application.
- If you have any queries, please do make use of the applicant helpline, eligibility check service, and stakeholder clinics that will run throughout the window.
- For help with your application you can contact Innovate UK:
  - by email [ietf@innovateuk.ukri.org](mailto:ietf@innovateuk.ukri.org)
  - by phone - call the helpline on 0300 321 4357 between 9:00-11:30am and 2:00-4:30pm, Monday to Friday
- You can also use the KTN application support service - [Jenni.mcdonnell@ktn-uk.org](mailto:Jenni.mcdonnell@ktn-uk.org)

If you have general questions for BEIS do get in touch at [ietf@beis.gov.uk](mailto:ietf@beis.gov.uk)

Thank you

# Industrial Energy Transformation Fund

23rd March 2021

Jenni McDonnell, KTN

[www.ktn-uk.org](http://www.ktn-uk.org)

The KTN logo is displayed in a bold, lowercase, sans-serif font. It is positioned on the right side of the slide, set against a large, semi-circular background that transitions from a dark green at the top to a bright green at the bottom. The letters 'k', 't', and 'n' are thick and closely spaced, with the 't' having a distinctive shape with a horizontal bar that extends to the right.

**ktn**

# Feasibility and Engineering Studies

This competition will help eligible companies build a pipeline of future deployment projects by supporting feasibility and engineering studies to reduce the costs and risks of either industrial energy efficiency or decarbonisation technologies.

Projects;

- can be collaborative or a single applicant
- must be **led by a business** that operates a manufacturing site or data centre in England, Wales or Northern Ireland where the study is carried out
- the lead applicant must be the manufacturer or data centre operator at the site that is the focus, and end-beneficiary of the study
- can be a **collaboration** between partners across businesses, RTOs, academics and public sector organisations

Total study costs must be;

- at least **£50,000** for engineering studies and complete within 24 months (max grant £14m)
- at least **£30,000** for feasibility studies and complete within 12 months (max grant £7m)

# Deployment of Industrial Energy Efficiency

This competition will help eligible companies to deploy technologies which improve the energy efficiency of the industrial process

Projects;

- can be collaborative or a single applicant
- must be **led by a business** that operates a manufacturing site or data centre in England, Wales or Northern Ireland where the technology will be deployed
- the lead applicant must be the manufacturer or data centre operator at the site that is the focus, and end-beneficiary of the project
- at the end of the project the technology must be installed and operating or be ready to operate.

The application will **need to demonstrate the potential for kWh energy savings** determined by measuring or estimating energy consumption before and after implementation of the technology solution.

Grant applied for must be at least **£100,000** and be completed by Dec 2024 (max grant £14m)



# Technology Readiness Levels

The IETF is looking to support technologies that are ready to be commercially demonstrated on industrial sites. The IETF is not seeking to fund general research, development and testing of a technology solutions

## Energy Efficiency (Studies and Deployment)

Eligible technologies must have been proven to work through successful operation on existing processes and/or be qualified through test and demonstration.

This corresponds to Technology Readiness Levels (TRLs) of **8, 9 and above**.

## Decarbonisation (Studies)

Eligible technologies 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

This corresponds to Technology Readiness Levels (TRLs) of **7, 8, 9 and above**



# Applications

You can include multiple projects within your application but you must make sure:

- all elements are located at the same eligible site
- all individual elements are eligible

If you are submitting multiple projects within an application, we will assess your application as a single submission.

If you want to apply to conduct projects across different sites, you will need to submit one application for each site.

You will not be able to aggregate studies and deployment projects together, but rather will need to submit separate applications to each relevant strand of the competition.

# Examples of technologies in scope

## Decarbonisation studies

- Fuel switching
- CHP with fuel switching
- On site carbon capture

## Energy Efficiency studies and deployment

- Energy use, optimisation and recovery
  - *industrial process control*
  - *upgrades to more efficient equipment*
  - *more efficient heat exchange*
  - *energy recovery from waste heat / energy recovery from waste pressure*
  - *resource efficiency to reduce wastage and optimise use of raw materials*
- Heating and cooling equipment
- Fuel switching

# Examples of technologies and costs that will not be supported

- Repair and maintenance
- Plant closure projects
- New build and expansions, building improvements
- Transportation
- Production of low carbon fuels such as hydrogen, biogas, biofuel
- Energy supply e.g. purchasing, installing and maintaining renewable electricity generation, unless from waste heat, waste pressure, waste process gas, or waste process liquid
- Connections to off site energy networks (e.g. to the gas grid)
- CO2 transport or long term storage, direct air capture of CO2 or development of test centres
- CHP without fuel switching

# Feasibility and Engineering Studies - Decarbonisation

## Fuel switching:

Applications for studies that involve **fuel switching** will be supported where the switch is to a less carbon intensive fuel:

- They involve a switch from fossil fuel to biomass, waste or hydrogen
- They involve a switch from fossil fuel to biogas, **but only where the site is off the gas grid**
- They involve a switch from more carbon intensive fossil fuels than the gas grid, to the gas grid
- They involve a switch from any fuel to electricity

Fuel combustion proposals must be above 1MWth

## Combined Heat and Power (CHP) fuel switching:

Applications for studies that explore **CHP** will only be supported where:

- the fuel switch follows the rules of the previous slide
- biogas CHP projects are off gas grid sites (biogas must be sourced from a dedicated supply that could not otherwise be injected into the gas grid)

# Feasibility and Engineering Studies - Decarbonisation

## Biomass fuel switching:

Applications for studies that explore switching towards **virgin biomass** or **residues** will be supported only where:

- The source of the biomass is considered sustainable and will not result in adverse environmental impacts such as air pollution.
- The output from the biomass combustion is used in high temperature applications, in which the operational temperature of the industrial process being heated is equal to, or more than 240 degrees C

# Eligible costs

## Feasibility and engineering studies

Applicants can claim for grant support towards the full costs of carrying out a study. You will need to show that these costs are necessary to carry out the study and represent good value for money. The level of grant that you can receive will depend on the size of company or companies incurring the costs of the study.

## Energy efficiency deployment projects

Applicants can claim for grant support towards the costs directly associated with achieving the energy efficiency improvement.

- If the sole purpose of the investment is to achieve an energy saving then the full costs may be considered eligible.
- If this is not the case (for example here an existing piece of equipment will be upgraded to a new model) then the costs of investing in energy efficiency are identified by reference to a similar, less energy efficient investment that would have been credibly carried out without the grant.
- The reference investment should be similar in terms of size, capacity, and all other technical characteristics besides those that achieve the energy saving, and meet relevant minimum standards. The cost differential represents the eligible costs.

# Grant versus Match funding

Organisation	Area A	Area C	Other areas
Large sized Co.	45%	35%	30%
Medium sized Co.	55%	45%	40%
Small sized Co.	65%	55%	50%
Non Businesses	100%	100%	100%

\* Non businesses capped at 30% of the total project costs



# Support and information

Networking platform

<https://ietf-spring.meeting-mojo.com/>

Application support service

[Jenni.mcdonnell@ktn-uk.org](mailto:Jenni.mcdonnell@ktn-uk.org)

Eligibility Checker

[IETF@innovateuk.ukri.org](mailto:IETF@innovateuk.ukri.org)

Briefing event registration

<https://eur.cvent.me/avqB3>



# Other Funding – Transforming Foundation Industries

The aim of the TFI programme is to improve the productivity and competitiveness of foundation industry companies and supply chains, by funding a step change in resource and energy efficiency in these industries.

## **Industry Investor Partner Competition – opens 15<sup>th</sup> April**

- SME and Investor partnership

## **Large scale collaborative R&D competition – open now, closes 10<sup>th</sup> March**

- Industrial research projects

## **Small scale Collaborative R&D competition – opens 1<sup>st</sup> June**

- more details to follow

Any Questions?