



Department for  
Business, Energy  
& Industrial Strategy

# Industrial Energy Transformation Fund Application Guidance (Phase 1)

Technological Scope for Feasibility and  
Engineering Studies

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Withdrawn



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# Technological Scope

Phase 1 of the Industrial Energy Transformation Fund (IETF) will support feasibility and engineering studies for potential deployment projects that will deliver energy efficiency or deep decarbonisation benefits if implemented.

## Energy Efficiency Studies

To qualify as an energy efficiency study, the potential deployment project will need to show kWh energy savings determined by measuring or estimating energy consumption before and after the implementation of an energy efficiency improvement relating to an industrial process. The energy savings must be measured and take place at site level.

Energy efficiency applications must involve the deployment of technology that has been proven to work through successful operations and/or is qualified through test and demonstration (Technology Readiness Level 8 and above).

Ground source and air source heat pumps must have a Seasonal Performance Factor of 2.5 (the Ofgem definition of Seasonal Performance Factor can be found [here](#)). Studies for projects in the following categories are out of scope.

Out of scope	Exceptions that are in scope
Repair and maintenance projects that would be undertaken in the normal course of business	
Plant closure projects	
Energy efficiency measures in transport	
Energy efficiency measures in building <sup>1</sup> heating and cooling	
Electricity generation (e.g. solar, wind, combined heat and power without fuel switching)	Electricity generation using waste heat, waste pressure, waste process gas, waste process liquid not suitable for transport use, or combined heat and power with fuel switching
Production of hydrogen fuels, biogas and biofuels	
Funding for waste heat recovery cannot be used to support capital delivery of new build plant or expansion of capacity at an existing plant. Heat recovery must be retrofit solutions on existing plant.	

<sup>1</sup> Updated 13/07/2020 to include 'building'

## Deep Decarbonisation Studies

A deep decarbonisation study must result in a significant reduction in the greenhouse gas emissions of an industrial process and may not necessarily have an energy efficiency benefit.

Deep decarbonisation applications (for feasibility or engineering studies) must be about the deployment of technology that either:

- has 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

## Biomass

Applications for studies that use **virgin biomass or residues** will be supported only where:

- they use fuel switching from solid fossil fuels (e.g. coal, coke), or from other fossil fuels in high temperature applications (more than 240 degrees C)
- biogas combustion or biogas combined heat and power projects are off the national or regional gas grid

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, through compliance with biomass sustainability criteria. The required biomass sustainability criteria are those used in [Schedule 3 of the Renewable Heat Incentive Scheme Regulations 2018](#).

These are not in scope:

- biomass projects that are less than 1MWth input
- conversion of biomass to biofuels for later use

## Fuel switching

Applications for energy efficiency or deep decarbonisation studies that involve **fuel switching** will be supported only where:

- they involve a switch from fossil fuels to grid-supplied electricity or to fuel of lower carbon intensity than the fuel originally used
- the new fuel is not of a higher carbon intensity than that of gas from the national grid

Industrial processes may be changed to switch fuels:

<b>From</b>	<b>To</b>
Fossil fuels	Biomass, waste or hydrogen
Fossil fuels more carbon intensive than the gas grid (e.g. coke, coal, oil)	Gas grid
Any fuel	Grid electricity, or electricity produced on-site using renewable sources

## Combined heat and power

Combined heat and power (CHP) study applications must involve fuel switching and meet the rules above. If your site is off grid, please contact Innovate UK by email at [support@innovateuk.ukri.org](mailto:support@innovateuk.ukri.org) as exceptions may apply. Combined heat and power projects must be at least 1MWe.

## Carbon capture, utilisation and storage

Applications for carbon capture, utilisation and storage (CCUS) studies must include realistic, economically planned CO<sub>2</sub> routes and include estimates of the energy and carbon costs of moving CO<sub>2</sub> to the disposal or utilisation site as part of its economic assessment.

The following applications are out of scope:

- studies for CO<sub>2</sub> transport networks or long-term storage
- studies to deliver direct air capture of CO<sub>2</sub> or the development of test centres for this technology

Studies for fuel combustion applications are only in scope if they are more than 1MWth input and are not intermittent. These will fall within the scope of the air quality regulations, namely the Medium Combustion Plant Directive (EU 2015/2192) or the Industrial Emissions Directive (EU 2010/75).

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