

Government invests over £31 million to help industry slash emissions and energy costs

- New funding will support British industries to reduce their reliance on fossil fuels
- reducing fossil fuel use will help industry to cut both emissions and energy costs
- funding will support development of innovative carbon capture and green energy technologies in the UK, supporting green jobs and encouraging investment

Over £31 million in new government funding will support industry to reduce its reliance on fossil fuels and slash carbon emissions, helping it to become greener and cutting energy bills.

The funding announced today (Tuesday 31 May) includes over £6.6 million to help industry move away from using red diesel, also known as gas oil – a type of fossil fuel commonly used for off-road vehicles and machinery, specifically in the quarrying, mining, and construction sectors.

It will see the development of red diesel alternatives, such as e-fuels and green hydrogen, as well as technologies which capture and store energy that would ordinarily be wasted from a vehicle or machine so it can be used instead. The funding forms part of the [Red Diesel Replacement competition](#) with winners from Phase 1 published today.

Over £5.5 million is also being invested to develop technologies that support industry to cut back use of high carbon fuels and switch to cleaner power sources, such as hydrogen, electrification or fuel from biomass and waste products. The funding will be awarded to winners of Phase 1 of the [Industrial Fuel Switching competition](#) with the cash supporting projects that will replace natural gas with hydrogen in industrial processes, and design heat pumps for use in manufacturing sites.

In addition, winners from the first stage of the [Carbon Capture Usage and Storage \(CCUS\) Innovation 2.0 competition](#) will receive a share of over £12 million for trailblazing projects aiming to advance next-generation CCUS technology to deploy at-scale by 2030, putting the UK at the forefront of the growing carbon capture market. Also launched today is the second call of the competition, with up to £7.3 million available for this next round. CCUS is a key developing technology that involves capturing and storing carbon emissions from industrial processes, from sectors such as power, cement, chemicals and refining. Establishing a CCUS industry in the UK will help unlock tens of thousands of jobs across the UK by 2030, while supporting the economic transformation of our industrial regions.

Energy and Climate Change Minister Greg Hands said:

As we accelerate the UK's energy independence by boosting clean, home-grown, affordable energy, it's crucial that our industries reduce their reliance on fossil fuels.

This investment will help them to not only cut emissions, but also save money on energy bills, on top of supporting jobs by encouraging green innovation across the UK.

Today's funding builds on previous government support to help industry become greener, such as the £505 million [BEIS Energy Innovation Programme](#), which included £100 million for industrial decarbonisation and CCUS, as well as the £315m [Industrial Energy Transformation Fund](#), which supports the development of technologies to help industry with high energy use to transition to a low carbon future. Alongside the [government's plans to boost the UK's long-term energy independence](#), this investment will help industry in the shift to a lower-carbon economy.

Some of the innovative projects receiving today include:

- **PUNCH Flybrid**, based at Silverstone in Northamptonshire, will receive £460,000 to deliver a high power electrically driven flywheel energy storage system, to store energy that would ordinarily be wasted from a vehicle or machine so the energy can be used instead
- **British Steel** in Scunthorpe will receive £161,050 for a study into switching its manufacturing processes from natural gas to green hydrogen
- **Ingenza** in Edinburgh will receive £443,632 to develop a new type of CO2 conversion technology, capturing carbon from industry and turning it into a versatile chemical that can be used across a variety of chemical, pharmaceutical, agricultural and household product sectors

Sam Cockerill, Chief Executive of Libertine said:

We are delighted to have been awarded further funding to continue to build on our work with MAHLE Powertrain. We believe Libertine's technology will play an essential role on the path to Net Zero for heavy duty powertrains, complementing battery electrification with clean power from renewable fuels. We are grateful to the UK government for their support and look forward to delivering this exciting project.

Lee Juby, NanoSUN Commercial Director said:

NanoSUN being selected as the recipient of this vital funding, is yet another demonstration of the UK's commitment to a zero carbon future. We are delighted to once again collaborate with BEIS in the mission to deliver the missing piece of the puzzle that will bring the hydrogen refuelling infrastructure up to speed for the decarbonisation of another sector.

Nick Owen, Dolphin N2 Technical Director said:

The grant from BEIS will enable a very promising area of Hydrogen research to be greatly accelerated, creating an opportunity for faster market uptake of our innovative but pragmatic Recuperated Split Cycle solution. Without this grant and the collaboration that it enables, Dolphin N2 would not have had the budget to increase the technological capability of our engine or to engage with end users to ensure that the project is providing viable solutions for the sector. We look forward to working with BEIS to maximise the benefits of our project and the wider Red Diesel Replacement programme.

Pete Rowe, Chief Executive of Deep Branch Biotechnology said:

This grant builds on our Innovate UK funded project, which has enabled us to develop strong commercial partnerships at both ends of the value chain. These include Drax Power Group at its biomass power station and leading sustainable aquafeed producer BioMar. Deep Blue C will result in a significant increase in the production efficiencies of Proton™. By reducing production costs as we scale, Proton™ will ensure a highly significant saving in carbon footprint for feed producers that switch from concentrated soybean meal or fishmeal, without an unjustifiable price premium.

James Bowers, Project Director, SSE Thermal said:

Flexible generation will continue to be essential as we transition towards a net zero future, providing vital back-up to a renewables-led system. It must, however, be low-carbon in its own right and alongside Equinor we are developing new power stations at Keadby and Peterhead equipped with carbon capture technology. Our engineering teams have already made great strides in ensuring optimum operational flexibility, whilst achieving high capture rates and the FOCUSS project will help us to go even further. This collaboration brings together various partners to develop new concepts which will benefit not only our projects but the wider Power-CCS industry and the funding from BEIS will be instrumental in pushing the project forward.

The Red Diesel Replacement, Industrial Fuel Switching and CCUS Innovation 2.0 competitions are all funded through the BEIS £1 billion [Net Zero Innovation Portfolio](#).

Red Diesel Replacement

The Red Diesel Replacement competition is a £40m scheme supporting the

development and demonstration of low-carbon technologies, infrastructure and fuels to help industry move away from using red diesel. 'Red diesel' is the term used for gas oil that is intended for non-road vehicles and dyed red to distinguish it from diesel for road use. Red diesel use accounts for 15% of total diesel for the UK.

At Budget 2020, the government announced that it would remove the entitlement to use red diesel from most sectors from April 2022 to help meet its climate change and air quality targets. BEIS launched the Red Diesel Replacement competition to provide grant funding to support the development and demonstration of innovative technologies to help decarbonise the construction, mining and quarrying sectors that will be most impacted by the removal of the red diesel rebate.

Read a [list of the Phase 1 winners of the Red Diesel Replacement competition](#). This announcement comes ahead of the launch of Phase 2 of the competition early next year.

Industrial Fuel Switching

The £55 million Industrial Fuel Switching competition supports innovation to develop fuel switch enabling technology for the industrial sector, to help industry switch from high to lower carbon fuels. Read a [list of the Phase 1 winners of the Industrial Fuel Switching competition](#).

CCUS Innovation 2.0

Through the CCUS Innovation 2.0 competition, up to £19.5 million in grant funding will be available for projects developing novel CCUS technology and processes that reduce the cost of deployment. Read a [list of winners for CCUS Call 1](#). Projects can [apply for funding under Call 2](#).

Also published today is a report with the [findings of a review carried out by AECOM and the University of Sheffield analysing next generation carbon capture technology](#). A particular focus of the review was the opportunity to deploy next generation carbon capture technology on UK industrial, waste and power sites between 2030 and 2035.

The outputs and learnings from the predecessor programme, [CCUS Innovation 1.0, 'Key Knowledge Deliverables'](#) are also published today, demonstrating the UK government's commitment to sharing lessons learnt from previous CCUS projects, to help accelerate the development of carbon capture internationally.