Tees Valley Hydrogen Transport Hub Briefing Event

Simon Buckley Zero Emission Mobility Lead Innovate UK KTN 7thth October 2022



KTN



Welcome and Housekeeping

- All participants will be muted throughout the webinar presentations
- Please use the chat box for networking and the Q and A box for questions
- For any technical issues, please contact Olivia Brown
- You can access a transcript by clicking on the "live transcript button
- The webinar will be recorded, and you will be sent the link, along with a GDPR compliant version of the chat, shortly after the webinar



Agenda

Time	Title / Organisation	Speaker
10:00	Welcome and Introduction	Simon Buckley, Zero Emission Mobility Lead, Innovate UK KTN
10:05	DfT Update	Dr Michael Whiteley, Head of Hydrogen, DfT
10:15	Regional Context	Chris Beck , Group Director of Business and Skills, TVCA
10:25	Competition Scope	Steffan Eldred, Innovation Lead, Hydrogen Transport, Innovate UK
10:50	Q and A	All
11:05	Comfort Break	All
11:15	Application Process	Dawn Manser, Portfolio Manager, Innovate UK
11:40	Q and A	All
11:55	Cleveland Police	Claire Wrightson, Head of Procurement and Fleet, Cleveland Police
12:05	Redcar & Cleveland Borough Council	Caroline Hearne, Climate Change & Sustainability Officer, Redcar & Cleveland Borough Council
12:15	Q and A	All
12:30	Close	Simon Buckley, Zero Emission Mobility Lead, Innovate UK KTN







Tees Valley Hydrogen Transport Hub Phase 2 Briefing Event

Mike Whiteley, Head of Hydrogen at DfT 07/10/2022



Transport Decarbonisation Plan, Hydrogen Strategy & Energy Security Strategy

Vision for the Hydrogen Transport Hub

What we aim to achieve

- Seed activity which will catalyse a critical mass of co-located supply (infrastructure) and demand (vehicles) to demonstrate commercial viability of hydrogen transport options.
- Explore where hydrogen works well in decarbonising transport, informing future government policy and investment decisions.
- Grow UK skills and expertise, positioning the Tees Valley at the forefront of the global hydrogen sector.
- Use lessons from the Hub to help other areas develop and realise their hydrogen ambition.



£20m funding for the phase two of the **Tees Valley Hydrogen Transport Hub**

- + £300k to support relevant skills in the region
- + £3m last financial year to kick start hydrogen transport activity in the region

How else is DfT supporting hydrogen across transport



UK Shipping Office for Reducing Emissions (UK-SHORE): £206m until March 2025 to support a range of zero emission technologies. Includes the multi-year Clean Maritime Demonstration Competitions, supporting the design and development of clean maritime solutions, for which hydrogen is in scope.



Zero Emission Buses: £205m to be allocated to a mixture of hydrogen and battery electric buses over this spending review period. £30m was allocated to the West Midlands Combined Authority in March 2022 to deploy 124 hydrogen fuel cell buses and accompanying refuelling infrastructure.



Zero Emission Road Freight Demonstrator (ZERFD) programme: £200m this spending review period to roll out vehicles and infrastructure for zero emission HGV technologies in the weight categories between 40 – 44t (battery electric and hydrogen fuel cell competition currently live). This follows £20m last year to support feasibility studies.



The **Jet Zero Strategy** was published in July 2022 setting an approach to achieve net zero UK aviation by 2050 including considering the role of hydrogen. The **Aerospace Technology Institute Programme**, £685m over three years, plus the £165m **Advanced Fuels Fund** may support hydrogen alongside other technologies and fuels.



Hydrogen for Transport Programme: £23m between 2017 and 2022, to deliver passenger cars and infrastructure across the UK, plus £2m for the **FCEV Fleet Support Scheme** until 2021, to introduce fleets to hydrogen technology.



Renewable Transport Fuel Obligation (RTFO): renewable hydrogen supplied for transport is eligible for support worth over £7 per kilogram under the RTFO.

TEES VALLEY COMBINED AUTHORITY

Chris Beck | Group Director of Clean Growth and Innovation

LOCATION



TEES VALLEY – THE PLACE



Population of 700,000 with 2.5 million people located within an hour's drive



£588.2m 10 year Investment Plan agreed

£74.6m on airport development programme



The area is served by three airports, Teesside International, Newcastle and Manchester



Situated within 1hr of six key universities including; Teesside, Durham, Newcastle and Leeds

Devolved skills budget focused on business needs



The East Coast Main Line at Darlington enables a 2hr 20min journey to central London



70% of regional businesses are internationally owned



Home to the deepest port on the east coast of England



Fast-growing economy worth £13.1bn



Home to the Government's new Northern Economic Campus



One of only ten Metro Mayors in the UK – devolution powers as London, Manchester and Liverpool

INFRASTRUCTURE

- Three dual carriageways unencumbered by weight and height
- Existing passenger links to East Coast Main Line
- Road freight capacity in place and operational from Teesworks



ROUTE TO CLUSTER NET ZERO



CHEMICAL CLUSTER



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TEESSIDE FREEPORT

- The UK's biggest and first operational Freeport
- 600 hectares of land



Employer NI contributions rate relief



Business rates relief



Enhanced capital allowances



Stamp duty land tax exemption



Enhanced structures and buildings allowance



HYDROGEN



Region has existing hydrogen storage caverns



Currently produce more than 50% of the UK's hydrogen



Hydrogen pipework connecting major cluster sites



Tees Valley announced as the DfT Hydrogen Transport Test Hub



Significant hydrogen production planned on and around Teesworks

PROJECTS

Blue hydrogen

- Kellas (1GW plant)
- bp (1GW plant)

Green hydrogen – linked to renewable energy production

- Protium (up to 60MW)
- EDF (hydrogen connected to near shore wind)
- ➢ bp (500MW)

HYDROGEN FOR THE HOME

- Northern Gas Networks proposal for up to 2,000 homes and businesses in Redcar to be heated with hydrogen gas from 2025
- Plans for residents and businesses to be powered by locally produced hydrogen
- Teesside targeted as hub for green hydrogen production by 2025



BIO ECONOMY – FROM MEAT FREE TO VACCINES



Research

- Teesside uni Horizon Centre
- CPI Biologics Centre
- CPI Novel Food Centre



DIVERSIFICATION

Treasury North

- Northern campus for Governmental departments relocation of civil servants from London as well as creation of jobs directly and indirectly.
- Over 1,200 jobs created as a result



Quality of Life

The people living in the Tees Valley are some of the happiest in the country. With low commute times people spend less time travelling to work and more time to enjoy all the benefits the coast and countryside has to offer.

Cost of living is also low in comparison to other large cities, which means that quality of life is much higher, leading to a happier and healthier workforce.



Life Satisfaction: Tees Valley and surrounding area: **7.52** England average: **7.38**





Happiness:

Tees Valley and surrounding area: **7.64** England average: **7.31**



Thank you

Introduction to Innovate UK and UKRI





UK Research and Innovation

We work with the government to invest over £7 billion a year in research and innovation by partnering with academia and industry to make the impossible, possible. Through the UK's nine leading academic and industrial funding councils, we create **knowledge with impact**.





Innovate UK

- We are the UK's innovation agency
- We support business-led innovation in all sectors, technologies and UK regions
- A key delivery body of the Government's Innovation Strategy

Our Mission

To help UK businesses grow through the development and commercialisation of new products, processes, and services, supported by an outstanding innovation ecosystem that is agile, inclusive, and easy to navigate.





UK ranks 4th in Global Innovation Index

- Innovation accounts for up to 50% of labour productivity growth
- Firms that persistently invest in R&D have higher productivity
- Innovating companies are more likely to export and generate growth



Tees Valley Hydrogen Transport Hub

Phase 2 briefing - Scope



7th October 2022

Inspire, Involve and Invest

Inspire:

- impress on the opportunity available through the HTH programme
- for DfT/IUK to convey what hydrogen in transport might look like in the future and how the hub
 is facilitating the journey
- be inclusive in the hub's design and implementation, working with and listening to industry to achieve this - shape the HTH at a critical point

Involve:

- offer a sounding board for where the challenges and opportunities with hydrogen in transport are
- to receive expert feedback from the supply chain in terms of where the hub can add value to industry and government aspirations around net zero.

Invest:

- inform, guide and reinforce the programme's interventions in light of the outcomes sought
- understand how the hub can create a value proposition by designing and implementing the right interventions



Hydrogen Transport Hub - Phase 1 Recap



Phase 1 HTH Programme recap

An opportunity to stimulate Green Hydrogen demand in the transport sector

2021 – 2022 with projects ending March 2022 with 6 month extended demos The main aims:

- Demonstrate the use of green hydrogen in transport to test business models and user operating needs in order to inform future large-scale hydrogen-based operational trials
- To increase the demand for green hydrogen transport and support laying the long-term groundwork for the hub
- To test the business models and user operating needs to inform future large-scale demonstrations or commercially sustainable operations.
- Support cross business collaboration in the energy and transport sectors









Phase 1 HTH Programme recap

An opportunity to stimulate Hydrogen demand in the transport sector



Hydrogen Transport Hub – Phase 2



Scope – Introduction

- The Department for Transport will work with Innovate UK, part of UK Research and Innovation, to invest up to £20 million for innovative projects.
- The aim of this competition is to work towards a long-term sustainable demand for hydrogen from transport and to de-risk hydrogen's adoption for transport owners and operators.
- This investment will support demonstrations of infrastructure and hydrogen powered vehicles across transport modes in real world operational settings across the Tees Valley.



ate Department for Transport



Scope – Tees Valley alignment

- Projects must be aligned to wider Tees Valley strategic priorities and integrate with other hydrogen activity in the region where feasible
- Commit to provide results and learnings from your project to reinforce the Hydrogen Transport Hub's commitment to encouraging hydrogen adoption in the UK
- Agree to support the Hydrogen Transport Hub's training and skills development remit where agreeable
- Integrate with the Tees Valley hydrogen cohort and network to be facilitated by the Hub
- We encourage projects to demonstrate links to other initiatives, such as the <u>OFGEM</u> <u>Strategic Innovation Fund</u>, Clean Maritime Demonstration Competition, Zero Emission Road Freight Demonstration, <u>Aerospace Technology Institute</u> and the <u>Net Zero Hydrogen</u> <u>Fund</u>.



Scope – Demonstration

Projects in this competition must:

- Demonstrate hydrogen transport solutions by 31 March 2025 for a minimum of 6 months with the expectation of continuing operations commercially after this period *looking for scale*
- Operate the demonstration in an open public setting or controlled environments, such as warehouses and distribution centres
- Track vehicle performance against stated metrics to understand benefits or challenges for the benefit of other regions and industry *projects which can address hard to decarbonise areas*
- Report on the benefits for passengers, customers and residents in the Tees Valley
- Develop plans and create conditions for long-term activities to create a demand for hydrogen in the Tees Valley from 2025
- Include operator training and vehicle familiarisation to aid usability



In addition for Strand 1 - construct one or more fixed hydrogen refuelling stations in the Tees Valley area

Scope – Costs and timings

- Total project costs must be between:
 - strand 1: £500k and £8 million
 - strand 2: £500k and £3.5 million
- Projects must:
 - start by 1st June 2023
 - end by 31 March 2025
 - include vehicle demonstration of at least 6 months
 - carry out its project work in the UK and intend to exploit its results from or in the UK
 - be led by a UK registered business and collaborate with others
 - N.B. research organisations undertaking non-economic activity can only share up to 30% of the total eligible project costs.



Department for Transport









Scope - Strand 1 and 2

Strand 1

- Must include construction of one or more fixed, and publicly accessible, hydrogen refuelling stations in the Tees Valley area and can include associated capital costs
- Refuelling station must be green hydrogen or meet the UK low carbon hydrogen. No Grey
- Demonstrate hydrogen transport solutions for a minimum of 6 months, with the expectation of continuing operations commercially after this period.

Strand 2

 Demonstrate an on vehicle hydrogen transport solutions for a minimum of 6 months, with the expectation of continuing operations commercially after this period.



Scope – Vehicle type

You can use any number of vehicles in your project including but not limited to:

- freight vehicles between 3.5 and 39 tonnes,
- light commercial vehicles under 3.5 tonnes
- mobile construction plant
- maritime or inland waterway vessels
- trains
- buses
- forklift trucks
- aircraft
- airside vehicles

Any form of hydrogen propulsion is in scope however, hydrogen combustion technologies must be advanced in pursuit of zero emissions and restricted to use on certain applications such as non-road applications.



Contact us prior to closing date if unsure whether in scope
Scope – Refuelling

- **Strand 1** You can incorporate temporary hydrogen refuelling solutions into your project whilst the required fixed refuelling stations are brought online. Temporary solutions must be sited in the Tees Valley and meet volume, quality, and pressure requirements of the vehicles they intend to refuel.
- Strand 1 & 2 Temporary stations must use either 'green' hydrogen or hydrogen that meets the UK's low carbon hydrogen standard.
- **Strand 1 & 2 -** Your project must put in place an aggressive roadmap to move towards solely green hydrogen by March 2025. The use of grey hydrogen is not permissible.



Scope – Refuelling cont.

Your project must:

- undertake site selection and all preliminary design and planning and permission requirements
- meet all required safety and regulatory requirements, including current and emerging international standards
- address operator and user needs with respect to refuelling efficiency and ease of use
- where possible, ensure refuelling capacity funded through the programme is accessible to other operators outside the consortia by appointment or separate agreement
- ensure dispensing of hydrogen that meets the UK's low carbon hydrogen standard, such as that produced using renewable electricity
- ensure infrastructure is located in an accessible and strategically viable location or locations
- utilise a proportion of state of the art infrastructure, capable of refuelling multiple vehicles rapidly and back-toback



Scope – Specific Themes

Your project can focus on one or more of the following demonstrations:

- hydrogen fuel-cell transport of any size or designation
- hydrogen combustion transport please refer to the 'Projects we will not fund' section
- road, maritime, rail, aviation transport
- non-road mobile machinery, such as forklift trucks and construction machinery
- agricultural and forestry tractors
- emergency and rapid response vehicles
- special purpose vehicles

Projects can include demonstrations of single mode operations using one vehicle type, multi-mode operations and end-to-end operations where a mix of vehicle types are used to undertake a defined journey or operation.



Scope – Hydrogen combustion

We are not funding projects that are Hydrogen combustion, where the transport application falls into the one or more of the following classifications:

- light commercial vehicles under 7.5t, category N, O 1 to 3
- buses of any weight or size classification, category M2 and M3
- motor caravan, campervan, motorhome
- lorries (trucks), 2 axels or more with a maximum gross weight (tonnes) of 7.5 or above
- special purpose vehicle including emergency response vehicles

This represents the Zero Emission preference – however, if you have an advanced, near zero emission ICE technology then this is an opportunity to demonstrate it in a non-road application.



Scope – Exclusions

We are not looking to fund projects that are:

- exclusively outside of the Tees Valley
- duel fuel vehicles which are not wholly zero emission, for example rely partly on fossil fuel
- heavy goods vehicles (HGVs) of 40 tonne or above
- Sustainable Aviation Fuel (SAF) projects.
- dedicated technology development projects which do not have the required demonstration
- not intended to lead to commercial activity after the project end date
- infrastructure projects related to hydrogen generation
- desk based studies into a future demonstration outside of the demonstration period
- dependent on export performance
- dependent on domestic inputs usage



Hydrogen Transport Hub Ph2 Summary

- Green hydrogen (or hydrogen meeting the UK's low carbon hydrogen standard) to create a long-term sustainable demand for hydrogen from transport and to de-risk hydrogen's adoption for transport owners and operators.
- Support for demonstrations of infrastructure and hydrogen powered vehicles across transport modes in real world operational settings across the Tees Valley.
- Maximum project window 22 months with a minimum demonstration period of 3 months.
- Total project costs between:
 - Strand 1: £500k and £8 million
 - Strand 2: £500k and £3.5 million
- Timings:
 - Open 6th October / Close 30th November
 - Applicants notified 10th February 2023
 - Projects start by 1st June 2023 / Projects end by 31 March 2025





October 2022





Zero Emission Road Freight

Partnership with the Department for Transport, focused on decarbonizing Heavy Goods Vehicles

Headlined by the £140 million zero emission road freight demonstration competition [closes for applications on 12/10/2022]:

- 5 year commercial demonstration of 100s of battery electric and hydrogen fuel cell HGVs
- Focussed on the largest heavy goods vehicles, multiple duty cycles and operators
- State of the art infrastructure and vehicles
- Data collection to underpin future HGV policy

Additional interventions planned for Autumn 2022:

- Innovation in batteries for road freight applications
- Innovation in truck charging and hydrogen refueling infrastructure
- Supporting uptake of battery and hydrogen trucks with public sector deployments (SBRI)



Clean Maritime Demonstration Competition – Round 3



- Open 29th September 2022 closes 9 November 2022
- Briefing event 30th September https://ktn-uk.org/events/cmdc-industryengagement-event/
- £60m funding available
- Support the development, testing and deployment of novel clean maritime technologies focused on on-vessel technologies or shoreside or offshore infrastructure
- Up to 24 months duration
- Project size £1m £10m (two strands)
- Scope available from https://apply-for-innovation- funding.service.gov.uk/competition/search

Contact KTN Maritime Lead, Matthew Moss: matthew.moss@ktn-uk.org

Contact Innovate UK – James Lovett, Innovation Lead, future maritime technologies James.Lovett@iuk.ukri.org







Net Zero Mobility: Collaborative R&D

Focus on low to mid TRL innovative propulsion technologies that will underpin the futire of net zero mobility.

Up to £10m is available in support of highly innovative R&D projects.

Business-led and collaborative 18 months in duration £250k – £1.5m total project costs Multi-modal

Example Themes:

- PEMD
- Fuel cells
- Energy management
- System integration

Briefing event 20th October 2022 - <u>https://ktn-uk.org/events/net-zero-</u> mobility-programme/

Further information please contact: <u>David.Tricker@iuk.ukri.org;</u> Joe.Lyford@iuk.ukri.org

Source KTN





Thank you



Steffan Eldred

Innovation Lead – Hydrogen Transport Innovate UK **Steffan.eldred@iuk.ukri.org**

Eligibility criteria





Previously submitted applications

This competition **does** allow you to submit a previously submitted application.

Previously submitted application	Not a Previously submitted application
A previously submitted application is an application Innovate UK judges as <u>not</u> materially different from one you have submitted before (but it can be updated based on the assessors' feedback)	A brand-new application, project or idea that you have not previously submitted into an Innovate UK competition OR A previously submitted or ineligible application which: ✓ has been updated based on assessor feedback ✓ and is materially different from the application submitted before ✓ and fits with the scope of this competition



Eligibility criteria

K

Innovate

UK

Project eligibility	 lead must be a UK registered business must be collaborative must carry out your project in the UK exploit the results from or in the UK Include an on vehicle demonstration of at least 6 months 			
Dates	Start by 1 June 2023 and e	nd by 31 March 2025		
Total project costs	Strand 1 Between £500k to £3.5m	Strand 2 Between £500k and £8m		
Project length	Up to 22 months			

Types of organisations we fund

- Business Small or Micro, Medium or Large registered in the UK
- Research Organisation (RO):
 - Universities (HEIs)
 - Not for profit distributing Research & Technology Organisation (RTO) including Catapults
 - Public Sector Research Establishments (PSRE)
 - Research Council Institutes (RCI)
- Public sector organisations and charities doing research activity

If you are 100% owned by a large parent company as a small subsidiary this means you are classed as a large company and will only be entitled to the relevant grant. For more information on company sizes, please refer to the <u>company accounts guidance</u>.



Compliance with the UK Subsidy Control Regime

On 1 January 2021, the UK left the EU and is no longer subject to EU laws on State aid. We draw your attention to the guidance issued by BEIS: <u>Complying with the UK's international obligations on subsidy control: guidance for public authorities</u>. Please be aware this is a living document and may be updated by BEIS as time progresses.

The set rules (typically GBER) which we previously relied on for the limits of what we could award, have now been replaced by internal decisions based on the new BEIS Subsidy Control Regime, and on policy, which will in turn set out bespoke eligibility requirements for each funding opportunity.

Innovate UK is offering funding for this competition in line with the UK's obligations and commitments to Subsidy Control. To ensure that Innovate UK remains compliant with the UK's international Subsidy Control duties in respect of:

- the EU-UK Trade and Cooperation Agreement;
- Article 10 of the Northern Ireland Protocol (successful applicants which are affected by the Northern Ireland Protocol will be funded in line with EU State aid regulations)
- Article 138 of the Withdrawal Agreement (some Union law applicable after 31 December 2020 in relation to the UK's participation in Union programmes and activities)
- the Subsidies and Countervailing measures within the WTO (ASCM)
- any other Free Trade Agreements active at the time of award

All awards will be conditional on compliance at all times with the UK's International obligations on Subsidy Control - this will be reflected in the terms and conditions of any award.



Due diligence for UK Subsidy Control Regime

Under the Subsidy Control Regime, we will carry out financial health checks and ongoing concern assurances on your organisation.

Certify you are eligible

When submitting an application, you must certify that you are eligible for funding. If you are unsure, please take independent legal advice before applying. Should you be successful, we will complete these financial checks and assurances before confirming the grant offer.

- For more information on company sizes, please refer to the <u>Company accounts guidance</u>.
- Further information is available on our website in the general guidance.



Eligibility Criteria - EU State Aid Regulations – Northern Ireland Protocol

If you are an applicant who is conducting activities that will affect trade of goods and/or electricity between Northern Ireland and the EU as envisaged by <u>Article 10 of the Northern Ireland protocol</u>, then you must apply under European Commission State aid rules.

Undertaking in Difficulty

For applicants subject to the European Commission State aid rules, you will be required to prove that they were not an "Undertaking in Difficulty" (UiD). We will ask for evidence of this.

This test applies to:

- companies that are more than 3 years old
- companies where more than half of its subscribed share capital has disappeared as a result of accumulated losses.
- your parent or holding company

Certify you are eligible

When submitting an application, you must certify that you are eligible for State aid. If you are unsure, please take legal advice before applying. Should you be successful, we will apply this test as part of our viability checks before confirming the grant offer.

Further information is available on our website in the general guidance under state aid.

If you are applying for an award funded under State aid Regulations, the definitions for company size are set out in the <u>European</u> <u>Commission Recommendation</u> of 6 May 2003.



Eligibility Criteria: Funding Opportunities

Funding for R&D projects split in to 2 categories; industrial research and experimental development.

For industrial research projects, you could get 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

For experimental development projects which are nearer to market, you could get funding for your eligible project 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

For research organisations conducting fundamental research you could get funding for your eligible project costs of up to 100%.

For general guidance on what our research categories are please visit:

https://www.ukri.org/councils/innovate-uk/guidance-for-applicants/general-guidance/categories-of-research-and-

development/#contents-list



Participation Rules

The aim of this funding opportunity is to:

- optimise the level of funding to business and
- recognise the importance of research base to project

At least **70%** of total eligible project costs must be incurred by business.

The maximum level (**30%** of total eligible project costs) is shared by all research organisations collaborating on the project.



What is collaboration?

In all collaborative projects there must be:

- at least two organisations claiming grant within the application (including the lead)
- a business or RTO-led consortium, which may involve both business and the research base
- evidence of effective collaboration

We would expect to see the structure and rationale of the collaboration described in the application.



Making more than one application

Any one business or RTOs may lead or be involved in any number of applications across the two strands of the competition.



Other Innovate UK projects

If you have an outstanding final claim or Independent Accountant Report (IAR) on a live Innovate UK project, you will not be eligible to apply to this competition, as a lead or a partner organisation.

We will not award you any further funding if you:

- applied to a previous competition as the lead or sole company and were awarded funding by Innovate UK, but did not make a substantial effort to exploit that award
- applied to a previous competition as the lead or sole company and failed to comply with grant terms and conditions.





Timeline	Dates
Competition Opens	6 October 2022
Briefing Event	7 October 2022
Submission Deadline	30 November 2022, 11:00
Interviews	w/c 30 January 2022
Applicants informed	10 February 2023



Innovation Funding Service (IFS)

Search for a funding competition and review criteria

Innovation competitions

Keywords

Anv



Hydrogen Transport Hub Demonstration Phase 2 - Strand 2

UK registered businesses can apply for a share of up to £20 million to demonstrate how hydrogen can be used to power transport solutions for end users.

Competition opens: Thursday 6 October 2022 Competition closes: Wednesday 30 November 2022 11:00am

Start new application

Or go to your dashboard to continue an existing application.

	-					
Summary	<u>Eligibility</u>	<u>Scope</u>	<u>Dates</u>	How to apply	Supporting information	
Descript	ion				will work with Innovate UK, pa vest up to £20 million for inno	
			The aim of t for hydroge transport ov	ble demand tion for		
				oss transport mod	emonstrations of hydrogen po es in real world operational se	
			This compe	tition is split into tv	vo strands:	

Funding competition

Hydrogen Transport Hub Demonstration Phase 2 - Strand 1

UK registered businesses can apply for a share of up to £20 million to demonstrate how hydrogen can be used to power transport solutions for end users.

Competition opens: Thursday 6 October 2022 Competition closes: Wednesday 30 November 2022 11:00am

Start new application

Or go to your dashboard to continue an existing application

Summary Eligibility	Scope Dates How to apply Supporting information
Who can apply	Your project Your project must:
	 have total costs of between £500,000 and £8 million start by 1 June 2023 end by 31 March 2025 last up to 22 months include vehicle demonstration of at least 6 months carry out its project work in the UK intend to exploit the results from or in the UK
	You must only include eligible project costs in your application.



Lead Applicant: create an account

The lead applicant must create an account:

UK registered businesses

Innovate

UK

Use Companies House lookup as it speeds up our checks by providing your company number. You are unable to enter this at a later date.

Research organisations, academics and universities

Enter your information manually so you are not listed as a business on IFS and ensure you receive the correct funding.



Used this service before? Please sign into your Innovation Funding Service account.		New to this service? If you haven't used the new Innovation Funding Service before you will need to create an account.
Sign in		Create account
	nnovation Funding Serv	ice
	Sign in	
	Email address	
1	Please enter your email add	ress.
l i	Password	
	Please enter your password	l
		Show
	Need help signing in or crea	ting an account?
	My email and/or password	isn't working
	in you applied previously using	g the old service, you will need to create a new account.
	Forgotten your password?	

Project Details

- Application Team Collaborators can invite organisations who you are working with on the project. Contributors can invite colleagues from your own organisation to help you complete your application. All team members and Lead applicants must complete the Equality, Diversity and Inclusion survey embedded in IFS as part of your application.
- Application Details Title, timescales, research category, innovation area and previously submitted application (y/n)
- Subsidy basis Will the project, including any related activities, you want Innovate UK to fund, affect trade between Northern Ireland and the EU? All participants must complete this section.
- Project Summary Short summary and objectives of the project including what is innovative about it
- Public Description Description of your project which will be published if you are successful
- Scope How does your project align with the scope of this competition? If your project is not in scope, it
 will be ineligible for funding



Application Questions

Detailed guidance available on IFS

UK

Application Form	n	Appendix?
Question 1	Applicant location (not scored)	No
Question 2	Operation location (not scored)	No
Question 3	Need or challenge	No
Question 4	Approach and innovation	Yes - optional
Question 5	Team and resources	Yes - optional
Question 6	Market awareness	No
Question 7	Outcomes and route to market	No
Question 8	Wider impacts	No
Question 9	Project management	Yes - mandatory
Question 10	Risks	Yes - mandatory
Question 11	Added value	No
Question 12	Costs and value for money	Yes - for strand 1 only

Application finances





To claim funding

Your business does not have to be UK registered with Companies House when you apply but it must be registered before you can receive funding.

You are unable to claim funding if:

- you are an overseas organisation, so your company number begins with FC
- your organisation is setup as a branch, so your company number begins with BR
- you are a collaboration with no formal structure of ownership or control, so your company number begins with ML
- you are a Crown Dependency:
 - if your company is based in Jersey, your company number begins with JE
 - if your company is based in Guernsey
 - if your company is based in the Isle of Man



British Overseas Territories

You are also unable to claim funding if your company is based in any of the British Overseas Territories (BOTs):

- Anguilla
- Bermuda
- British Antarctic Territory
- British Indian Ocean Territory
- British Virgin Islands
- Cayman Islands
- Falkland Islands
- Gibraltar
- Montserrat
- Pitcairn Islands
- Saint Helena, Ascension and Tristan da Cunha
- South Georgia and the South Sandwich Islands
- Turks and Caicos Islands



Labour

Eligible:

- staff working directly on project
- paid by PAYE
- NI, pension, non-discretionary costs

Ineligible:

- dividends
- bonuses
- non productive time
- overtime

Labour

You can claim the labour costs of all employees you have working on your project.

► Labour costs guidance

If your application is awarded funding, you will need to account for all your labour costs as they occur. For example, you should keep timesheets and payroll records. These should show the actual hours worked by individuals and paid by the organisation.

£25,862 -

Working days per year

Number of staff and roles within the project

232

Role within project	Gross employee cost	Rate (£/day)	Days to be spent by all staff at this grade	Total costs	
Project Manager	50000	£216	120	£25,862	<u>Remove</u>
	0	£0	0	£0	<u>Remove</u>
Add another role					
				Total labour costs	£25,862



Overheads

Innovate UK's definition

Additional costs and operational expenses incurred directly as a result of the project. These could include additional costs for administrative staff, general IT, rent and utilities

Indirect (administration) overheads

Please ensure they are additional and directly attributable to the delivery of the project

Direct overheads

- e.g. office utilities, IT infrastructure, laptop provision not covered by capital usage
- must be directly attributable to the project
- provide detailed breakdown together with methodology/basis of apportionment

Overhead costs £ 44,483 ▲ You can incur overhead costs associated with those directly working on the project as well as indirect (administration) overheads. To be eligible both overhead categories need to be directly attributable to the project. The indirect overheads need to be additional as well as directly attributable. Note that there are certain cost categories/activities which are not eligible. To find out which costs are ineligible/eligible refer to our project costs guidance. ▶ Overheads costs guidance ● Overhead costs ● No overhead costs ● 20% of labour costs ● Calculate overheads

Calculate overheads

If you feel your overheads are higher than 20% you may calculate a value using the Innovate UK model in the spreadsheet available below. The model shows you which types of indirect costs associated with your project you may claim. For support with this option, please contact our Customer Support Service on 01793 44 2700. Any value claimed under this model will be subject to a review. This will assess the appropriateness of your claim if your grant application is successful.

Download the overhead calculation spreadsheet

```
Download as an Excel document <u>overhead calculation spreadsheet.xlsx (16KB)</u>
Download as an Open Office document <u>overhead calculation spreadsheet.ods (10KB)</u>
```

Upload your completed spreadsheet

No file currently uploaded

+ Upload



Material costs

Please be clear on what the materials are, just putting consumables does not provide enough detail.

If insufficient information is provided, we will request more information should you be successful which may delay your project start date.

Materials £10,000 -You can claim the costs of materials used on your project providing: • they are not already purchased or included in the overheads they are purchased from third parties • they won't have a residual/resale value at the end of your project. If they do you can claim the costs minus this value Please refer to our guide to project costs for further information. Materials costs guidance Please provide a breakdown of the materials you expect to use during the project Item Quantity Cost per item (£) Total Software 10000 £10,000 Remove £0 Remove 0 Add another materials cost





Capital equipment usage

Eligible:

Used in the project or shared with day-to-day production.

Calculations will need to be in line with your accounting practices.

Even if the equipment is depreciated fully over the life of the project this must be added under capital equipment.

Capital usage	£750
You can claim the usage costs of capital assets you will buy for, or use on, your project.	
<u>Capital usage guidance</u>	
Please provide a breakdown of the capital items you will buy and/or use for the project.	
Item description	
Laptop	
New or existing item	
New Existing	
0 0	
Depreciation period (months)	
24	
Net present value at the start of your project or the price you bought it for (\pounds)	
Residual value at end of project (£)	
500	
Utilisation (%)	
50	
Net cost	
£750	


Subcontractors

Justified and quantified.

If non-UK subcontractors are being used, you will need to provide strong justification on why an UKbased subcontractor is not being used.

If you are subcontracting to a parent or sister company, please ensure you list at cost and do not include profit. You can subcontract work if you don't have the expertise in your project team. You can also subcontract if it is cheaper than developing your skills in-house.

Subcontracting costs guidance

Please provide details of any work that you expect to subcontract for your project.

Subcontractor name

Robotics experts ltd

Country where the subcontractor will work

UK

Role of the subcontractor in the project and description of the work they'll do

facilitation and availability of robotics labs

Cost



Travel and subsistence

Eligible:

Costs must be directly linked to the project.

Please breakdown your costs as follows:

- Travel
- Accommodation
- Subsistence

If you have an annual trip to visit the parent company this is not an eligible cost.

Travel and subsistence					
You should include travel and subsistence costs that relate to this project.					
Purpose of journey or description of subsistence cost	Number of times	Cost each (£)	Total (£)		
Travel to robotics labs for testing	12	100	£ 1,200 Remove		
monthly project meetings	12	150	£ 1,800 Remove		
Add another travel cost					
	Total trav	el & subsistence costs	£ 3,000		



Other costs

Costs that could not be added under previous headings Do not double count

Patent filing costs for new IP – SMEs up to £7,500

Other costs	£0 ▲
Please provide details of any project costs which cannot be covered by the other cost categories.	
Other costs guidance	
Please note that legal or project audit and accountancy fees are not eligible and should not be included as ar cost'. Patent filing costs of new IP relating to the project are limited to £7,500 for SME applicants only. Pleas provide estimates of other costs that do not fit within any other cost headings.	

Description and justification of the cost

Estimated cost (£)



Add another cost



Project cost summary

	Total	Labour	Overhead costs	Materials	Capital usage	Subcontracting costs	Travel and subsistence	Other costs
Barry Shaw Experts Ltd Partner	£230,162	£84,052	£16.810	£90,550	£0	£35,000	£3,750	£C
EMPIRE LTD Lead organisation	£331,442	£222,414	£44,483	£11.750	£13,000	£36,795	£3,000	EC
University of Bath Partner	£19,762	£8,104	£5,731	£412	£0	£0	£504	£5,011
Total	£581,366	£314,570	£67,024	£102,712	£13.000	£71,795	£7.254	£5.011

Ensure the highlighted costs fits the criteria for this competition

Research organisation participation is no greater than 30% of the total project costs.

All organisations can see a summary of project costs.



Funding

Funding rules

The level of funding awarded will depend upon the type of organisation and the type of research being undertaken in the project

Funding is calculated by project participant

IFS will advise the maximum grant % you can request based upon your answers to:

- type and size of organisation
- research category defined by the lead applicant in the Application Details section of the application





Organisation or type of activity	Industrial research	Experimental development
Business (economic activity)	Micro or Small – 70% Medium – 60% Large – 50%	Micro or Small – 45% Medium – 35% Large – 25%
Research organisation (non-economic activity)	Universities – 100% (80% of Full Economic Costs) Other research organisations can claim 100% of their project costs	 Other research organisations must: be non-profit distributing and disseminate the project results and explain in the application form how this will be done
Public Sector Organisation or Charity (non-economic activity)	100% of eligible costs	 Must: be performing research activity and disseminate project results and explain in the application form how this will be done ensure that the eligible costs <u>do not include work / costs</u> <u>already funded</u> from other public sector bodies
Research organisations (undertaking economic activities) Organisations receive funding related to the size of their organisation	Micro or Small – 70% Medium – 60% Large – 50%	Micro or Small – 45% Medium – 35% Large – 25%



Consortium

Worked example – £500k total cost project

Project costs for 5 partners (2 SME, 1 University, a Catapult and 1 large), doing experimental development.

Organisation type	Organisation size	Total eligible project costs	Maximum % of project costs which may be claimed as a grant	Requested grant amount	Required match funding contribution
Business	Medium	£130,000	35%	£45,500	£84,500
Business	Medium	£93,000	35%	£32,550	£60,450
Business	Large	£130,000	25%	£32,500	£97,500
University	HEI (80% FEC)	£72,000	100%	£72,000	nil**
Catapult	RTO	£75,000	100%	£75,000	nil
Total		£500,000		£257,550	£242,450
** 20% FEC no	t to be shown as a d	contribution		•	

Research base costs	£147,000
Research participation rate of total eligible projects costs (cannot exceed <u>30%</u>)	<u>29%</u>



Academic partners







We use the Research Councils' Joint Electronic Submission System (Je-S) to collect academic finances.

The Je-S system automates the collection of Full Economic Costs (FEC) based costs from academic partners and tells them exactly what numbers should be used in the application form for their costs.

Also to collect project finance details from non-HEIs (e.g. RTOs) that are claiming they are carrying out academic quality work and want to be funded on an FEC basis.

Using Je-S means that Innovate UK follows standard Research Council guidelines on funding universities and enables Research Councils to easily co-fund Innovate UK projects.

The Je-S system is completely separate from Innovate UK and we cannot advise on its usage.



Project costs – academic partners

Enter the TSB reference number here

Enter the TSB Contribution column figures from *your* J-eS output document into the project costs section of the application.

Upload the Je-S with council status form as a PDF at the bottom of the screen.

Any queries, contact Je-S Helpdesk (not Innovate UK)

- jeshelp@je-s.ukri.org
- 01793 444164

My REF	
Financial resources	ts from the summary of resources section on your Je-S form
Directly incurred	TSB Contribution (please refer to the TSB contribution column)
Staff	11
Travel & subsistence	22
Other costs	33
Subtotal	£ 66
Directly allocated	
Investigators	44
Estates Costs	55
Other costs	66
Subtotal	£165
Indirect costs	77
Exceptions	



Submitting your application





Checking your finances are complete

Finances Summary

A

The following organisations have not marked their finances as complete: • EMPIRE LTD

<u>Return to the finances section to complete your finances</u> This application cannot be submitted unless finances have been marked as complete by all partners.

		Total costs	% Grant	Funding sought	Other public sector funding	Contribution to project
Barry Shaw Experts Ltd Partner	~	£230,162	70%	£161,113	£0	£69,049
EMPIRE LTD Lead organisation	♪	£282,655	70%	£197,859	£0	£84,797
University of Bath Partner	~	£239,114	0%	£0	£0	£239,114
Total		£751,931		£358,972	£0	£392,959

All organisations have marked their finances as complete.

Research organisation participation is no greater than **30**% of the total project costs.

IFS DOES NOT VALIDATE TOTAL PROJECT COSTS



Editing a submitted application

<u>test</u> Application number: 242 Competition: 599 Covid de minimis round 2	Awaiting assessment Application submitted	Reopen by clicking here

Terms and conditions /ou must agree to these before you submit your application.		
Award terms and conditions	🗸 Complete	
Review and submit APrint your application		

	Terms and conditions	Open all
	Award terms and conditions	✓ Complete 🕂
Remember to press 'Submit application'	Submit application	
Innovate	Need help with this service? <u>Contact us</u>	
UK		

Submit your application early!

Customer Support can help resolve any issues you might have when submitting but only if they are contacted before the deadline. Once the deadline has passed, your application cannot be submitted.





Assessment





How our assessors assess?

All applications are assessed by an independent **pool** of assessors drawn from industry and academia.

We require our assessors to maintain confidentiality and declare any conflicts of interest, ensuring a fair and transparent process.

Assessors are unable to contact you regarding your application content. Therefore, your application should contain:

- a justification for a viable opportunity for growth and a level of innovation that necessitates public investment
- clear and concise answers
- the right amount of information
- no assumptions

We recommend you review the competition brief and guidance for help.



How are successful applicants selected for funding?

Assessors will score each section of your application.

After the assessor process, InnovateUK will independently moderate assessor scores. Any outliers in scores may be removed and your total score will be updated.

You will then receive email notification to offer grant funding or to inform you that your application has been unsuccessful on this occasion.

Whether successful or unsuccessful in receiving grant funding, you will receive feedback on your application. It is intended to be constructive in nature and to highlight both the strong as well as the weak areas of your application.



Interviews

If you are invited to progress to interview:

- you can bring up to nine people to attend the interview
- you will have 20 minute to present a maximum of 20 PowerPoint slides, with no videos or embedded links
- there is a **30 minute** Q&A session lead by members of the panel
- you will have an opportunity to respond to the assessor feedback so the panel can read it prior to interview
- the response to feedback, presentations and presenters' names have to be provided ahead of the interview



Project setup for successful applicants





Notification

If you are unsuccessful in this competition

You can use the feedback from the assessors to develop your idea and apply into another competition that allows previously submitted applications

If you are successful in this competition

- you will be assigned a Delivery Executive who will guide you through the Project Set Up process
- you will have 7 days to complete the project team, project details and bank details
- you will then have 90 days to complete project set up funding may be withdrawn if this is not completed within this timeframe

Please ensure all your contact details in the IFS portal are correct and up to date and that you regularly monitor it.



Project set up

- All communication will be through IFS.
- Lead applicant must provide collaboration agreements and exploitation plans if applicable.
- Any partners with individual total project costs of up to £50,000 must provide evidence with a Statement of Expenditure (SoE).
- Any partners with individual total project costs above £50,000 must provide evidence with an Independent Accountants Report (IAR).

Project delivery

- All grants are paid quarterly in arrears and are only paid following quarterly reporting and necessary audits.
- Claims can only be made for costs incurred and paid between the project start and end dates.
- Monitoring of the project includes a visit from the appointed Monitoring Officer.



Additional Support





Innovate UK EDGE

Bespoke growth and scaling support at the business end of innovation

- Intensive growth and scaling support tailored to the needs of each of our ambitious innovation-driven clients
- Offered alongside project funding to Innovate UK award winners, most of whom engage us. We are also available to all high growth potential innovative small or medium-sized businesses*
- Engagement at early, growth and scaling stages, with our core high growth service and enhanced Scaleup Programme
- Delivered by 290 innovation and growth specialists embedded in regional ecosystems across the UK, including a board of expert scaleup directors

*subject to eligibility and currently in all nations and regions outside Scotland



Innovate UK EDGE

An innovation and growth specialist, or scaleup directors, work with a company's leadership to hone its commercial strategy and help it take targeted action to, for example:

- Build investment readiness
- Manage innovation effectively
- Enter global markets
- Providing local to national to international growth and scaling support





Innovate UK EDGE





Contact us via: innovateukedge.ukri.org

A great idea can come from anyone

- Diversity in businesses contributes to enhanced performance and commercial success
- We welcome and encourage applications from people of all backgrounds and are committed to making innovation support more visible, accessible, and inclusive.
- We can provide support for people who have a disability or long-term condition and face barriers applying to us
- If you would like any support or advice, please contact Customer Support Service on 0300 321 4357 or <u>support@iuk.ukri.org</u>





Claire Wrightson Head of Procurement and Fleet

Cleveland Police



Cleveland Police

• The Police & Crime Commissioner for Cleveland and Cleveland Police is responsible for the totality of policing in Cleveland, as well as a range of community safety activity and services for over 550,000 residents across the Cleveland areas of Hartlepool, Middlesbrough, Redcar and Cleveland and Stockton.



 Cleveland Police employs 2,525 members of staff of which 1472 are Police Officers and therefore use a vehicle



Fleet

- The Force currently operates approximately 341 vehicles with increases anticipated over the next 2 years. This is split as follows:
 - Bikes 10
 - Vans 92
 - Cars (marked and unmarked) 239
- Fuel Types operated currently:
 - Diesel majority
 - Electric
 - Hybrid
 - Petrol





Alternative Fuel

- Started to introduce electric vehicles
- Initial focus on unmarked fleet
- Awaiting vehicle developments increased battery capacity
- Investment into Infrastructure across the estate



Why Interested in the Hub

- We operate a 24/7 365 day Fleet
- One size doesn't fit all
- Considerations:
 - Fleet is situated across the whole of Cleveland
 - Location of re-fuelling stations
 - Cost of the vehicles





Redcar & Cleveland Borough Council Fleet Overview



Caroline Hearne Climate Change & Sustainability Officer





Redcar & Cleveland Borough Council Area



Overview

- Fleet of around 200 vehicles ranging from small panel vans to 32t Hookloaders.
- The vehicles operate a range of services including waste operations, clean and green neighbourhood, home to school transport and other council activity.
- Range of existing fuel in use:
 - around 5% electric vehicles
 - currently trialling HVO on small sweeper fleet
 - have been involved in initial Hydrogen vehicle trials to explore opportunity







Fleet Overview by Department

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VEHICLES BY DEPARTMENT	No of Vehicles
NEIGHBOURHOOD TEAMS	69
WASTE SERVICES	36
HOME TO SCHOOL TRANSPORT	29
HIGHWAYS	26
PROPERTY SERVICES	15
ENFORCEMENT	6
VEHICLE FLEET AND WORKSHOPS	5
ADULT SERVICES	4
TREE TEAM	4
CHILDRENS SERVICES	2
IT SERVICES	2
DEMOCRATIC SERVICES	1
FACILITIES MANAGEMENT	1
Grand Total	200

6 . . .



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Fleet Overview by Type

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VEHICLE CATEGORY AND TYPE	No of Vehicles	VEHICLE CATEGORY AND TYPE	No of Vehicle
Rigid HGV (>3.5 - 7.5 tonnes)	73	Diesel cutter (>1.6 litre)	14
MEDIUM BUS	22	GRASSCUTTER	14
TIPPER WAGON	21	Small diesel car = 1.7 litre	12
TIPPER VAN	20	SMALL STREET SWEEPER	7
MINIBUS	8	HATCHBACK CAR	5
SMALL REFUSE WAGON	1	Electric Van (2.220 tonne)	10
PLATFORM TOWER	1	SMALL PANEL E-VAN	10
Diesel van Class III 1.74 to 3.5 tonnes	46	Rigid HGV (>7.5 tonnes-17 tonnes)	7
SMALL PANEL VAN	31	LARGE STREET SWEEPER	4
PANEL VAN	8	MEDIUM REFUSE WAGON	3
PICKUP	4	Small Petrol Cars = 1.4 litre	3
LUTON VAN	2	QUAD BIKE	3
PEOPLE CARRIER	1	Grand Total	200
Rigid HGV (>17 tonnes)	35		
REFUSE WAGON	24		
LARGE GRITTER	4		
HOOKLIFT	3		
DEMOUNT	2		
GULLEY EMPTIER	2		



*

Redcar & Cleveland & Hydrogen



 2,000 home hydrogen heating trial via Northern Gas Networks

- Provision to produce green hydrogen using offshore wind
- Existing hydrogen storage tanks available at Wilton Centre



Redcar & Cleveland Opportunities



• 2030 Net Zero target

• Existing net zero vehicle options will not meet all our requirements

 Option to trial new technology with support from manufacturers







Thank You



Contacts

Customer Support Services

0300 321 4357 (Monday - Friday 9-5pm) support@iuk.ukri.org



Innovate UK ukri.org/councils/innovate-uk

Innovate UK KTN ktn-uk.co.uk

Simon.buckley@ktn-uk.org



Innovate UK EDGE innovateukedge.ukri.org



Thank you and close



