Call outline

Small research project funding

Round 2 - April 2021

**Decarbonising
UK Freight Transport**

Summary sheet

Call type: Small research project funding

Closing date: 16:00, 7th May 2021

Funding Available: Up to £175,000 (£140,000 at 80% Full Economic Cost) is available in this call. There is no minimum project value but please note that no single application will be awarded in excess of the maximum funding per research question (see pages 8 and 9).

How to apply: Applicants should submit an application form, available from the Decarbonising UK Freight Transport website, to decarbonisingfreight@ucl.ac.uk by the deadline stated below. Applications submitted after the deadline will not be considered.

Assessment process: The review and selection process has three key stages; initial review by independent industry and academic reviewers, panel review and ratification.

Key dates:

Call opens – launch date	12th April 2021
Deadline for applications	7th May 2021
Funding decision	25th May 2021
Projects may start from	Mid-June 2021
Expected end date	6 to 9 months after start date

Key contact: Alexis Fidget, Network administrator, a.fidgett@ucl.ac.uk

Contents

1 About Decarbonising UK Freight Transport Network

UK freight transport is on the cusp of a sociotechnical transition away from fossil fuel dependency. This transition will require major investment to fleet and infrastructure, cause disruption to assets and business models, and will trigger significant reconfiguration. Whilst the scaling up of fossil phase-out is most likely to occur from the 2030s onwards, the next 10 years of investments are critical to enabling the transition, and to mitigating transition risks to the freight sectors, and by association UK trade.

Decarbonising the UK's Freight Transport Network Plus (Decarbonising UK Freight Transport) is focused on unlocking and enabling the next step in UK freight transport decarbonisation by providing a rigorous and independent co-created (stakeholder and academia) knowledge and evidence base and accompanying recommendations and strategy to accelerate investment. Decarbonising UK Freight Transport will prioritise research that can enable the energy/propulsion switch across the road, rail, sea and air freight modes

Decarbonising UK Freight Transport is led by the UCL Energy Institute, in partnership with Newcastle University, University of Strathclyde, University of Oxford, University of Edinburgh, University of Westminster, University of Cambridge, University of Plymouth, The University of Manchester, Heriot-Watt University and University of Southampton. It is funded by the Engineering and Physical Sciences Research Council (EPSRC), part of UK Research and Innovation (UKRI), in the Decarbonising Transport Networks+ programme.

The work of Decarbonising UK Freight Transport is focused on five research themes:

1. The role of data and models for unlocking implementation decision making (public and private).
2. Managing uncertainty (macroeconomic, policy and technology) whilst mitigating climate risk in investment decisions.
3. Fuel and propulsion technology pathways: multi-modal; multi-sectoral and UK, EU and Global energy system synergies and differences.
4. Aligning drivers for decarbonisation investment/policy with air pollution, UK, EU and Global climate policy and integrating into private sector decision making.
5. Coupling the evolution of logistics and its infrastructure with decarbonizing freight.

For more information on the themes and their objectives visit
https://www.decarbonisingfreight.co.uk/

2   Funding call – Small research project funding

This is an open call for proposals of six to nine months duration, to be funded by Decarbonising UK Freight Transport. The proposals must clearly address one of the two research questions on pages 8 and 9. It is expected that two projects will be funded (one per research question), although note that whilst there is no minimum value for a request, the maximum that shall be awarded to any single project is fixed per research question. Exact details on the amount that can be awarded for each of the proposals are stated in the research questions (page 8).

This document contains key information regarding the application process that applicants will need to follow in order to submit their proposal to this call. The theme specific requests for proposals on pages 8 and 9 contain the details of the types and scope of projects expected, and the research questions that applicants will need to address.

3   Timetable

Call opens – launch date	12th April 2021
Deadline for applications	7th May 2021
Funding decision	25th May 2021
Projects may start from	Mid-June
Expected end date	6 to 9 months after start date

4   Scope

In this round, funding is available for a maximum of two small research projects which will address the research questions as set out on pages 8 and 9. Applications to this call for small research projects should be submitted by 16:00, 7th May 2021 to decarbonisingfreight@ucl.ac.uk.

5   Eligibility

- Every Small Project shall have a named Lead University. This organisation may apply independently, or may include other Project Partners in its application.
- Any organisation that is eligible to receive UKRI funding, Higher Education Institutions, or those registered as an Independent Research Organisation with UKRI is eligible to be part of the consortium with the Lead University.
- Funding will be disbursed from UCL to the Lead University only. Any subsequent distribution of funding to Project Partners shall be the responsibility of the Lead University.
- The award holder may include other stakeholders (Project Partners) in their project team but should not exceed more than three co-investigators. The inclusion of co-Investigators should be clearly justified in respect of their added value (e.g. bringing expertise from a different discipline, or a different methodology) and the duties/responsibilities they will commit to undertake as part of the project.
- Industry participation and 'matched funding' is strongly encouraged and desirable. Estimates of contributions (whether cash or in-kind) would be a useful addition to the application; industry participation needs to be shown as appropriate and adding value to the proposal, i.e. 'is it necessary?' and 'what does it add?'

- Each project shall have a named Principal Investigator (PI). The PI shall be employed continuously by the Lead University (i.e. their post will outlast the project). The PI shall be considered the key contact for the award, taking responsibility for delivery, budget and reporting. The PI must be from the organisation that will administer the grant. The PI will take intellectual leadership of the project and manage the research. All named investigators are responsible for ensuring that successful proposals are undertaken and completed in the manner specified.
- Any funding requested for staff shall only be awarded for named individuals, who are already in post in the organisation. The short duration of the Small Projects precludes the option of making new appointments in the funding period.
- Early career researchers[1] (ECR), (including post-doctoral researchers and new or probationary lecturers) are eligible to participate and are encouraged to do so, but shall not act in the role of PI. Where an ECR is the primary actor in a Small Project, a PI shall be named and shall be considered as the key contact for the award, taking responsibility for delivery, budget and reporting. In this case, a request for a modest percentage of the PI's time may be included in the request (expected to be at least 2%).
- Impact: in line with UKRI expectations, it is recommended that applicants should allocate approximately 10% of the requested costs for impact activities.

6 Costs

If successful, applicants will receive 80% of the full economic costs on proposals submitted and applicants' host institution will be required to support the remaining 20%. Exact details of the amount that can be awarded for each proposal is stated in the research questions on page 8. Applicants should ensure that their request is appropriate for the scope, ambition and expected impact, and can viably be spent within the maximum six to nine month project duration.

- Directly Allocated staff: Investigators and Technicians.
- Directly Incurred staff: Researchers and Technicians.
- Travel and Subsistence.
- Other Directly Incurred costs: project specific consumables, consultancy fees, and equipment/data costing less than £5,000.
- Other Directly Allocated costs: e.g. support staff salaries, a share of the costs of departmental support staff and/or the costs of access to major research facilities.
- Estates and Indirect costs.

The following may not be requested under this Call:

- Associated studentships.
- Any equipment/data costing more than £5,000 (including VAT).
- Costs associated with International Co-Investigators.
- Costs associated with UK co-investigators in business, civil society or government bodies.

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[1] Defined as researchers active in research in the UK who have not previously led a project with funding exceeding £100k. Early Career Researchers shall typically be no more than four years post award of PhD/EngD. They may be within a researcher role or an academic role at the point of application.

7 Expectations

To align with the expectations of the Decarbonising Transport Networks+ programme and Decarbonising UK Freight Transport, successful applicants shall:

- Be guided by the theme leads and the work of the Decarbonising UK Freight Transport network. The project lead (PI) is expected to be in close communication with their respective theme leads with regards to the progress of the work. It is expected that the PI of the funded project updates the theme leads, project manager and network administrator from the start date, every three months on the progress (including completion of key activities and milestones) of the project through to completion.
- Comply with end of project requests for reporting. Reporting requirements will be provided to successful teams. These shall align with UKRI templates and ResearchFish and include commentary on whether aims have been achieved, methods used, data produced, publications or other outputs, other outcomes, impact achieved and planned, problems encountered, and forward plans.
- Attend Decarbonising UK Freight Transport events as requested, including presentations to the Strategy Board meeting and Annual Conference (full timetable available from the Network's website and from the Network administrator).
- Promote and amplify the work of Decarbonising UK Freight Transport through their own networks. The Decarbonising UK Freight Transport Administrator will maintain contact with successful teams and those subscribed to receive updates to ensure that important information and announcements are disseminated widely.

8 Review and selection Process

The review and selection process has three key stages; initial review, panel review and ratification. Please see the process timeline below.

Stage 1 Initial Review

Applications received at decarbonisingfreight@ucl.ac.uk

Applications sorted & sifted – removal of any that don't meet specific criteria e.g. budget, incomplete application forms – and allocated to reviewers.

Applications sent for review to independent reviewer pool.

- Each application is sent to two reviewers (industry and academic).
- Shortlist compiled based on the top scoring proposals, two per research question.

Stage 2 Panel Review

The shortlisted high scoring applications are reviewed by an independent panel of reviewers.

- Any proposals that have a significant difference in review scores will be forwarded to the panel for review.
- Final list is compiled, one proposal per research question is selected.

Stage 3 Ratification

Final list of projects to be ratified by the Decarbonising UK Freight Transport strategy board.

Important note: Decarbonising UK Freight Transport reserves the right to reject proposals that are incomplete and that do not meet the requirements highlighted on the checklist before sending them to reviewers. The checklist can be found in the Application Form.

9 Evaluation criteria

There are six primary criteria against which all proposals shall be assessed. These are:

- **Quality**
- **Importance**
- **Ability to deliver**
- **Impact**
- **Equality, Diversity and Inclusion**
- **Value for money**

All applications shall be assessed against the same criteria, regardless of the size of request. Proposals shall be scored on how well they meet each of the six criteria (of equal weighting) on a scale of 0-3, as follows:

0 = criteria not met
1 = criteria met at the minimum level
2 = criteria partially met
3 = criteria fully met

Criteria	How the criteria can be met
Quality	• State clearly the aim and objectives of the project, how you aim to answer the research question, novelty of the research proposed, reference to the evidence base (including references to literature) and the expected addition to knowledge • Describe and justify the appropriateness of the research approach/method, making clear links to which team members will be responsible for delivery
Importance	• Describe the relevance to decarbonising freight transport and unlocking investment • Describe the strategic importance of the project, how the project fits with national and international priorities e.g. Industrial Strategy, clean growth strategy, Road to Zero, Clean Maritime Plan, etc.
Ability to deliver	• Justify why this team is the most appropriate to deliver the project, with reference to their track record/s • Explain (with a timetable and work package/task structure) how you will ensure you deliver the project on time, including sufficient engagement and networking as part of the programme • Provide an account of the key risks and how you will manage these (include any risks in respect of ethics, data management, and staffing, Covid-19)
Impact	• Describe the long-term effect that you expect your project to have on the decarbonising freight transport agenda, and how you would expect this impact to be measured or recognised. • Set out your pathway/s to impact, including your target audience/s and beneficiaries, how you will reach them, and what change you expect to see

	• Explain your overall approach to industry engagement and/or collaboration, including which people/organisations you will involve and how you will ensure this engagement • State the proposed outputs and outcomes from the project, with reference to destination journals, conferences and industry groups
Equality, Diversity & Inclusion	• Describe how the project considers incorporating Early Career Researchers (ECR)[2] • Describe how the project fits with the EDI statement of the Decarbonising UK Freight Transport[3]
Value for money	• Provide a clear justification for all resources requested • Explain why your request is appropriate, given your project scope, ambition etc. • State how you will contribute to the Decarbonising UK Freight Transport, making reference to your long-term plans for follow-on funding and collaboration

10 Submissions

To download an application pack, visit the Decarbonising UK Freight Transport website https://www.decarbonisingfreight.co.uk/

The deadline for submissions is 16.00, 7th May 2021

Submissions should be sent to this email address: decarbonisingfreight@ucl.ac.uk

11 Enquiries

A FAQ page is available on the Decarbonising UK Freight Transport website. This will be updated regularly, applicants are requested to check these in the first instance if they have any questions regarding the call.

12 Sub-agreement

A template of the grant agreement will be sent to all applicants. Applicants are requested to review this or send to their departments for further consideration. It is expected that all projects will start by mid-June 2021 and timely execution of the agreement is important so as to not delay the start date of the projects. We expect to have fully executed subcontracts with the awardees by 11th June 2021.

13 Contact

For any enquiries about the call, please contact Alexis Fidgett, Network administrator at decarbonisingfreight@ucl.ac.uk

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[2] Defined as researchers active in research in the UK who have not previously led a project with funding exceeding £100k. Early Career Researchers shall typically be no more than four years post award of PhD/EngD. They may be within a researcher role or an academic role at the point of application.
[3] Available in Decarbonising UK Freight website decarbonisingfreight.co.uk

14 Theme specific requests for proposals

Activity within the Decarbonising UK Freight Transport project is distributed across five themes. More information and the specific objectives of each theme can be found here decarbonisingfreight.co.uk. The overall objective of the project is to identify ways to accelerate investment into the decarbonisation of freight transport (primarily UK freight transport, but acknowledging that the UK is a node in a global freight system). The focus is in particular on shipping and trucking as dominant modes for both UK international and domestic freight activity and emissions, but the decarbonisation of all modes of freight transport (and the potential interaction between modes) is of interest to this project. Projects funded in previous rounds can be found here decarbonisingfreight.co.uk/funded/

14.1 Research question from Themes 1 and 3

Background

Logistics is concerned with the constrained organisation of the timely transport and storage of goods. As such logistics operations must be organised within a system defined by a set of operational, regulatory and technology constraints. Widespread decarbonisation of road freight vehicles and the sea freight they often interconnect with, will change these constraints and create a logistics system that is different to that which exists today.

Maximum funding available

£100,000 (£80,000, 80% fEC).

Research Question

What effects will widespread decarbonisation of freight transport systems (particularly road freight and sea freight) have on the design, operation, costs and environmental footprint of logistics systems in the UK?

Required approach

Proposals should demonstrate how quantitative modelling approaches can be used to investigate the interaction between constraints and timing challenges in the following:
- Modal choice.
- Energy infrastructure – including where possible production/import and storage, both for electrification and liquid renewable fuels given their expected respective roles within road and sea freight.
- Warehouse operations.
- Port/rail head operations.
- Logistics operations and timing, including alignment between international freight transport into/out of UK and domestic freight operations.
- Emergent interdependencies.

The required outputs are:
- A design and justification of modelling approach.
- A description of how the modelling approach could be used as an input to investment decision making processes.
- A proof of concept of the modelling approach and assessment of future development needs.

14.2 Research question from Themes 4 and 5

Scope

Wide scope (all stakeholders inc. owners, govt, fleet operators, ports, etc.) analysis of the factors influencing port investment decisions.

Maximum funding available

£75,000 (£60,000, 80% fEC).

Research Question

How can ports support decarbonisation across multiple transport modes, what investment is required and how can they lead to incentives being aligned across transport modes to achieve the UK's 2050 Net Zero target?

a) What role can ports play, and to what extent can ports, or port clusters, act as hubs for decarbonising different modes of transport (i.e. shipping, rail and road)?
b) What are the key technology developments in alternative fuels and logistics to enable decarbonisation (e.g. bunkering, digitalisation, energy production and storage)?
c) How can the move towards 'smart ports' facilitate decarbonisation?
d) What investments are needed and how can these be secured?
e) What are the roles of different actors in driving port decarbonisation?

Engineering and
Physical Sciences
Research Council

Decarbonising
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