



**UK National
Clean Maritime
Research Hub**

Wave 1 Flexible Funding – Call for Responsive Research Proposals

1. Call Headline Details

Maximum proposal value to be provided by the UK-MaRes Hub per award.	£50,000 at full economic costing (100% fEC)
Funding level	80% of fEC
Number of awards available in this call	Funding for up to 10 projects
Available funding across this call	Up to £500,000 (100% fEC, funded at 80% fEC)
Call opens	Tuesday 12th March 2024
Closing date for application submissions	Tuesday 9th April 2024 at 16:00
Deadline for notification of outcome	10th May 2024
Project duration	Up to 6 months
Anticipated project start date	1st June 2024
Project end date	31st December 2024

2. About the UK-MaRes Hub

Led by Professor Tony Roskilly, the UK National Clean Maritime Research (UK-MaRes) Hub was established in September 2023 with £21.3 million of funding from the Engineering and Physical Sciences Research Council (EPSRC), Department for Transport (DfT), collaborating universities and industry. To support a transition towards a clean maritime sector, the UK-MaRes Hub has brought together 26 experienced academics from 13 universities to conduct innovative research under 5 themes: marine fuel scale up and safety; power and propulsion systems; vessel design and efficiency; port and vessel support infrastructure; as well as digitalisation, maritime operations, and finance. To date, the Hub is supported by 72 project partners i.e., 39 business and industrial organisations and 8 civic bodies based in the UK as well as 25 international partners. The Hub has engaged with the wider maritime stakeholder community to stimulate collaboration, accelerate research exploitation, and maximise impact.

3. About this Flexible Funding Call

Through a total of 3 waves of Responsive Research Calls, the Hub aims to fund up to 30 world-leading responsive research **projects that are eligible for EPSRC funding**. Each successful project will have a total value of approximately **£100k** — with up to **£50k to be provided by the UK-MaRes Hub** (100% fEC but funded at 80% fEC) utilising this Responsive Research Fund and **1:1 match funding leveraged from project partners**. The match funding can be either in-kind and/or cash contributions, as is standard for UKRI calls. Wave 1 Funding is available for up to 10 projects that address any of the following priority areas:

- Real-time vessel data communication.
- Novel energy solutions for ports.
- Ammonia and liquid hydrogen bunkering/debunkering.
- Risk and uncertainty regarding marine regulations and policy implications.
- Modal shift: utilising coastal shipping to move freight to create marine freight highways.
- Novel energy-saving devices to improve vessel efficiency.
- Novel cost-effective nuclear propulsion systems.

These priority areas were identified through engagement and consultation with key stakeholders that represent the maritime sector in the UK.

4. Eligibility

The proposed responsive research project **must not** duplicate research that is already planned by the UK-MaRes Hub, as highlighted below:

- Real-time vessel data communication: Analysis of real-time data using big data analytics and machine learning to optimise operational efficiency and minimise energy consumption at ports.
- Novel energy solutions for ports: Efficiency improvement measures for relevant subsystems (including machinery/equipment upgrade, electrification, new port/terminal design, cold ironing, and renewable energy sources) and development of real time predictive models/techniques that forecast/optimize shoreside operations to support decision making.
- Ammonia and liquid hydrogen bunkering/debunkering: Computational fluid dynamics (CFD) models of hydrogen fuelling for compressed gaseous hydrogen and liquid hydrogen refuelling stations.
- Risk and uncertainty regarding marine regulations and policy implications: Development of economic, financial, and econometric models to understand maritime decarbonisation from microeconomic, financial, and managerial perspectives.
- Novel energy-saving devices to improve vessel efficiency: Development of digital twins using artificial intelligence and machine learning to support the design and optimisation of hull and propeller that are integrated with hybrid powertrain systems for both retrofit and new build ships.

Who is eligible to apply?

- Academic staff based at a UK institution eligible of receiving EPSRC funding. **Please note: Academic staff at the existing UK-MaRes Hub institutions are not eligible.**
- Whilst this funding is open to eligible individuals at all career stages, projects **must** be led by an **Early Career Researcher (ECR) supported by an experienced academic mentor**. We define an ECR as any individual who has been awarded a PhD but has not yet held a research grant of £100,000 or more. Eligible individuals from under-represented groups are particularly encouraged to apply.

[Standard EPSRC eligibility rules](#) apply in relation to the status of the organisation and the employment status of individuals applying. The term of employment of a fixed-term employee must extend beyond the duration of the proposed research project. Any proposal that is incomplete, does not meet the eligibility criteria of this call, or duplicates the research that is already planned by the UK-MaRes Hub will not be considered for funding.

Please note: Given the short-term nature of these Flexible Fund awards, **there is an expectation that the required resources are available to start the project within the timescales outlined above.** No time allowances will be made to recruit staff, and any project unable to meet this criterion will not be considered for funding. Should a project be selected for funding, and it is later found that the required resources are not in place, the award will be withdrawn.

5. Expected Project Outcomes

All projects awarded under the Wave 1 Flexible Funding call are required to leverage 1:1 match funding from Project Partners (as evidenced by letters of support). Proposals should also embed EDI, skills development, knowledge transfer and impact in the proposed activities. All project teams are expected to disseminate their research findings at a UK-MaRes Hub event, participate in the technical sprint organised by the Hub, and publish at least one journal article.

Please note: Each successfully funded project will be assigned an adviser from the UK-MaRes Hub academic consortium to support the project and provide a link to Hub's research portfolio.

6. Eligible Costs

Eligible costs may include funding requested for:

- Staff costs (Principal Investigator, Co-Investigator(s), Research and Technical Staff).
- Travel and subsistence.
- Consumables.

Please note: Equipment costs are not eligible under this call.

7. Equality, Diversity and Inclusion (EDI)

EDI is at the heart of all UK-MaRes Hub's activities, and we encourage engagement from under-represented groups across the maritime research community. To promote EDI and support capacity building across the sector, the UK-MaRes Hub invites applications from researchers at all career stages, however projects must be led by ECRs who meet EPSRC eligibility criteria. Successful proposals will consider and support EDI and skills development as part of their proposed project activity.

8. Submission Process

A submission will consist of a complete application form and letters of support from project partners. Letters of support from each project partner must be on headed paper, signed, and dated after 10th^{1st} September 2023, clearly indicating their meaningful contribution to the project and an auditable monetary value of the match funding.

Applications should be submitted by email to:

admin.clean-maritime-research-hub@durham.ac.uk by 16:00 on Tuesday 9th April 2024.

Any applications received after this date will not be considered.

9. Evaluation Process

All proposals will go through an initial sift stage by the Hub Manager and Administrator. The sift will focus on the completeness of the proposal, whether the proposal meets the eligibility and evaluation criteria, and whether it duplicates the research that is already planned by the UK-MaRes Hub (see **Section 4**). The shortlisted proposals will then be assessed by independent reviewers in line with the four evaluation criteria below:

- (1) Quality, ambition, and novelty.
- (2) Strength of the project partnership and matched contributions.
- (3) Ability to deliver the proposed research and complete the project by 31st Dec 2024.
- (4) Clear plans for the proposed research, project management, engagement, EDI, skill development, and impact.

In line with the feedback provided by independent reviewers, the Responsive Research Working Group (RRWG) of UK-MaRes Hub will rank the proposals and make award recommendations to the Exploration and Responsive Research Council (ERRC) of UK-MaRes Hub. The ERRC will assess recommended for funding, take a portfolio view of potential Wave 1 Funding projects, and make the final selection of successful responsive research projects.

10. Point of Contact for Queries

If you have any questions, please do not hesitate to contact us by emailing:
admin.clean-maritime-research-hub@durham.ac.uk

Best of luck with your application – we look forward to receiving your proposal!