

FLOWB

UK/US – Floating Offshore Wind Supply Chain Acceleration Bilateral Programme

Grant Funding Scope and Guidance



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In partnership with:



Innovate
UK

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PREFACE

Offshore Renewable Energy Catapult (ORE Catapult) are pleased to offer grant funding to UK Enterprises who are developing new and innovative technologies within the Floating Offshore Wind Supply Chain. This document outlines the scope and guidance for prospective applicants.

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1 SUMMARY OF GRANT FUNDING

1.1 Overview

Funding Type: Direct Grant

Application Type: Open

Project Size: Your Projects total grant funding request should not exceed £500,000 and be no less than £300,000

Project Duration: Up to 18 months

Funding Description: ORE Catapult will provide a total of £1.5million to between 3 and 5 UK businesses developing new and innovative technologies which are being developed for the benefit of the Floating Offshore Wind Supply Chain Industry. ORE Catapult has worked with the Innovate UK and the Advanced Research Project Agency Energy (ARPA-E) to identify collaboration opportunities with Atlantis Phase 2 Awardees:

- National Renewable Energy Laboratory (**NREL**)
- University of Maine (**UoM**)

The aim of this competition is to aid UK businesses to develop innovative technologies and provide opportunities for international collaboration and export opportunities. Your proposal must address one of the following areas of interest for our US partners and the UK Floating Offshore Wind Industry:

- Advanced Controls and Conditional Health Monitoring
- Novel Mooring Line Design, Configuration and Materials
- Low Carbon Concrete Manufacturing and Assembly for Concrete Floating Foundations
- Innovative Dynamic Cable Designs

For the purposes of this funding call Innovation can be defined as a new or improved product or process (or combination thereof) that differs from the previous products or processes and that has not been made available to potential users (product) or brought into use (process).

1.2 Collaboration

ORE Catapult expects all applicants of the grant funding competition to work collaboratively, in some capacity, with one of the following US Enterprises:

- National Renewable Energy Laboratory – USFLOWT 10 Project Team
- University of Maine – VolturnUS+

The above partners will not be treated as Project Partners or receive any funding from ORE Catapult or Innovate UK.

Projects proposed with any other US organisation/Entity shall not be considered for this funding call.

1.3 Dates

Activity	Start Date	End Date	Time
Application Window	15th of April 2024	31st of May 2024	12:00 Noon
Briefing Webinar	TBC	TBC	TBC
Application Selection Notification	N/A	Approximately 30 th of June 2024	N/A
Project Funded Grant Start Date	July 2024	31 st of December 2025	N/A

2 ELIGIBILITY CRITERIA

2.1 Who Can Apply

2.1.1 Your Project must:

- Have a total grant funding request between £300,000 and £500,000
- Start by the 1st of June 2024
- End by 31st of December 2025
- Carry out the majority of the activities from within the UK.
- Intend to exploit the results of the project from or in the UK.

To apply for a direct grant from this competition, your organisation must be a UK registered business of any size. **Applications from academic institutions, charities, not for profits, public sector organisation or a research and technology organisation (RTO) will not be accepted.**

2.1.2 Non-funded partners:

Your project can include partners that do not receive any of this competition's funding, for example non-UK businesses. Their costs will count towards the total project costs. This does not include the US partners outlined above. It could, for example, include UK Floating Offshore Wind Project Developers.

2.1.3 Subcontractors:

Subcontractors are allowed in this competition. Subcontractors can be from anywhere in the UK and you must select them through your usual procurement process.

You can use subcontractors from overseas but must make the case in your application as to why you could not use suppliers from the UK.

You must provide a detailed rationale, evidence of the potential UK contractors you approached and the reasons why they were unable to work with you. We will not accept a cheaper cost as a sufficient reason to use an overseas subcontractor.

All subcontractor costs must be justified and the total subcontractor budget must not exceed more than 35% of the total project cost.

2.1.4 Number of Applications:

You may only submit one application per organisation. Where an organisation submits 2 applications both will be rejected.

2.2 Subsidy Control

2.2.1 Overview of Subsidy Control in FLOWB Programme

ORE Catapult will distribute the funding through the Research, Development Innovation (RDI) Streamlined Subsidy Scheme (“**RDI Streamlined Route**”). All projects shall be compliant with the RDI Streamlined Route. For this grant funding call, ORE Catapult will fund projects that are compliant with Category 2: Industrial Research and Experimental Development Projects. For more information on the RDI Streamlined Route, please see the [UK Governments Guidance](#).

2.2.2 Additional Information

If you are unsure about your obligations under the Subsidy Control Act 2022 or the State aid rules, you should take independent legal advice. We are unable to advise on individual eligibility or legal obligations.

You must always make sure that the funding awarded to you is compliant with all current Subsidy Control legislation applicable in the United Kingdom.

This aims to regulate any advantage granted by a public sector body which threatens to, or actually distorts competition in the United Kingdom or any other country or countries.

2.3 Funding

Up to £1.5 million has been allocated to fund innovation projects in this competition. Funding will be in the form of a direct grant and distributed in accordance with the Subsidy Control Act 2022.

If your organisation’s work on the project is commercial or economic, your funding request must not exceed the limits below. These limits apply even if your organisation normally acts non-economically but for the purpose of this project will be undertaking commercial or economic activity.

For feasibility studies and 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 more information on company sizes, please refer to the [company accounts guidance](#).

If you are applying for an award funded under State aid Regulations, the definitions are set out in the [European Commission Recommendation of 6 May 2003](#).

2.4 Eligible Expenditures

The below costs are eligible for funding through the FLOWB Programme. The funding will only be given where the costs are incurred as direct result on the activity of the project and are wholly for the benefit of the project results. The funding is limited to the project term. Funded costs for the FLOWB Programme include:

- Personnel Costs
- Indirect Costs (20% of Personnel Costs)
- Equipment
- Subcontracting
- Travel and Subsistence
- Other goods, works and services
- 'Other Costs'

All costs must be in compliance with category 2 of the Research, Development and Innovation Streamlined Route. The total sub-contracting costs should not exceed more than 35% of the total project costs.

2.5 Terms and Conditions

Successful applicants will receive a Grant Offer Letter (GOL) that outlines the contractual terms between both ORE Catapult and the Awarded Applicant. **The terms and conditions within the Grant Offer Letter shall not be subject to negotiation.**

3 SCOPE

3.1 Scope Overview

ORE Catapult have identified four areas and project types that will be funded through the FLOWB 2024 Funding Call. These areas have been determined through collaboration with our US Partners, NREL and University of Maine. Our US partners are looking for Innovative UK entities that they can collaborate with to develop and advance their novel Floating Wind Platforms. The projects proposed should look to develop the technologies through scaled testing activities in collaboration with one of the US Partners.

3.2 Specific Themes

3.2.1 Predictive Controls and Conditional Health Monitoring

ORE Catapult are interested in funding research and development into innovative technologies which can identify and predict the degradation of floating wind substructures, their mooring lines and dynamic cable solutions.

The technologies and Innovations developed using FLOWB grant funding shall be able to maximise power outputs of light weight floating structures either through:

- Predicting and optimising operations and maintenance schedules.
- Through developing predictive control systems for floating offshore wind turbines which minimises structural loads and avoids large platform oscillations.

3.2.2 Novel Mooring System and Anchor Designs

Projects may be focused on the mooring and anchoring systems for the VolturnUS+ and USFLOWT and/or innovative material which can be deployed in both UK and US waters. UK entities that are adapting mooring systems which are used in other industries (e.g. oil and gas) are encouraged to apply. Projects should be focused in areas around:

- Mooring system configuration which limit the mooring line footprint/spread for light weight concrete substructures.
- Novel mooring line material or mooring line types.
- Light weight anchor designs for rocky sea beds

3.2.3 Low Carbon Concrete Manufacturing and Assembly for Floating Foundations

The manufacturing of concrete floating substructures could increase the local content and cost competitiveness of floating offshore wind developments in the UK. Similarly, the pre-assembly of turbines and floating substructures at quay sides are currently limited due to the port infrastructure both in the UK and US.

The University of Maine are planning the development, manufacturing, assembly and demonstration of the VolturnUS+ platform. Projects proposed in this specific theme should be aligned with the University of Maine through the development and testing of Innovative technologies at scale.

Projects should be focused in the following areas:

- Manufacturing of low carbon concrete floating substructures.
- Technologies that aid the pre-assembly and launching of light weight floating substructures.
- Innovations to maximise quayside space during manufacturing and assembly processes for floating offshore wind.

3.2.4 Innovative Dynamic Cable Designs and Protection Systems

Development of 'next generation' dynamic cables for floating offshore wind platforms. Projects may be focused on:

- Cable routing for the VoltturnUS+ and USFLOWT10
- Cable protection systems and solutions (e.g software or hardware) for dynamic cables
- Innovative buoyancy modules for dynamic cables

3.3 Projects we will not fund

ORE Catapult will not fund projects that:

- Are not delivered by a UK business
- Have already started
- Would be able to start without FLOWB Grant Funding
- Have previously started and failed to complete
- Have been proposed by a financially ailing business
- Have been proposed by companies that cannot clearly demonstrate a business case or market opportunity, including an export strategy.

3.4 Introductions to US Partners

ORE Catapult can facilitate introductions to our US Partner's technical teams. Should you wish to explore this possibility please fill in our [Expressions of Interest form](#). Both NREL and University of Maine shall provide Letters of Support for projects at their own discretion. Please note, it is not a requirement to have a Letter of Support to apply for this programme.

4 HOW TO APPLY

4.1 Before you start

You must review the guidance section of this document before submitting your application.

The Application Form and Finance Form is available for downloading via the [FLOWB Programme Website](#). The Application Form is in PDF format and has editable sections. All editable sections should be filled out.

Applicants should complete the following forms:

- Application Form – PN000700-DOC-11-FLOWB - Application Document – Rev 1
- Finance Form – PN000700-DOC-12-FLOWB Application Finance Form Final Rev 1

4.2 What we ask you

Your Application in split into 4 sections:

- Project Details
- Application questions

- Finances
- Project Impact

4.3 Application Questions

Section Number	Question Number	Question
1	1	Organisation Details
	2	Research Type – Industrial Research or Experimental Development
	3	Project Details
2	4	Need and Challenge
	5	Approach and Innovation
	6	Team and Resources
	7	Project Management
	8	Outcomes and Route to Market
3	9	Costs and Value for Money
4	10	Wider Impacts

Within Section 2, 3 and 4, each written question has a limit of 400 words.

You are expected to provide ORE Catapult with a financial forecast for your project. The financial forecast should be provided in quarters and applicants should use the template provided (see Section 4).

Note that funding is through a grant and evidence of incurred costs will be required from successful applicants. Full evidence of all project costs will enable payment of the eligible grant funded portion. **Eligible costs are net of VAT.**

ORE Catapult wish to fund projects and UK entities that have a clear vision and strategy to commercialise the technologies being developed. This should include a strategy to export the technologies developed through the FLOWB funding.

4.4 Submitting your application

Before submitting, it is the applicant's responsibility to make sure:

- That all the information provided in the application is correct
- Your proposal meets the eligibility and scope criteria

- All sections of the application are complete

You may submit one appendix to support your answers (e.g. business plan, project plan, risk register) It must be a PDF and can be up to 5 pages long. The font must be legible when printed on A4-Sized Paper.

All documents shall be submitted to the FLOWB email address. FLOWB@ore.catapult.org.uk. A confirmation email will inform the sender that the submission has been received. Once you have submitted your application, you will be unable to make changes or send an alternative proposal.

4.5 Assessment

The applications will be assessed by Independent External Assessors and ORE Catapult technical experts.

4.6 Accessibility and Inclusion

We welcome and encourage applications from people of all backgrounds and are committed to making our application process accessible to everyone. This includes providing support, in the form of reasonable adjustments, for people who have a disability or a long-term condition and face barriers applying to us.

You must contact us as early as possible in the application process. We recommend contacting us at least 15 working days before the competition closing date to ensure we can provide you with the most suitable support possible.

You can contact the FLOWB Programme team by emailing FLOWB@ore.catapult.org.uk or by phoning Magnus Willett, Senior Project Manager on +44 (0) 7423098270. Please note that our working hours are 9-5pm, Monday to Friday.

5 SUPPORTING INFORMATION

5.1 Overview of US Partner Projects

ORE Catapult have identified two partners from the United States for the FLOWB programme. These partners have received their funding from within the United States. The funding they have received is to develop their novel Floating Offshore Wind Platforms. Ideally, ORE Catapult would like the FLOWB funding projects to collaborate with either NREL, or the University of Maine.

5.1.1 National Renewable Energy Laboratory (NREL)

The National Renewable Energy Laboratory (NREL) have been designing an innovative floating offshore platform (USFLOAT) to unlock the offshore wind market by lowering the cost of energy below the current value of fixed-bottom offshore wind plants. The project uses a revolutionary substructure based on a bioinspired, ultra-compliant, modular, and scalable concept and advanced control system. The design aims to reduce project capital expenditure through a modularised slender structure, efficient load path, and effective use of materials.

In 2020, ARPA-E issued NREL with a \$1.5 million award to complete a preliminary design of a 10-MW unit by using CCD optimisation techniques and advance the commercialisation of the floating offshore wind technology. Further optimisation validation of the USFLOWT design is underway.

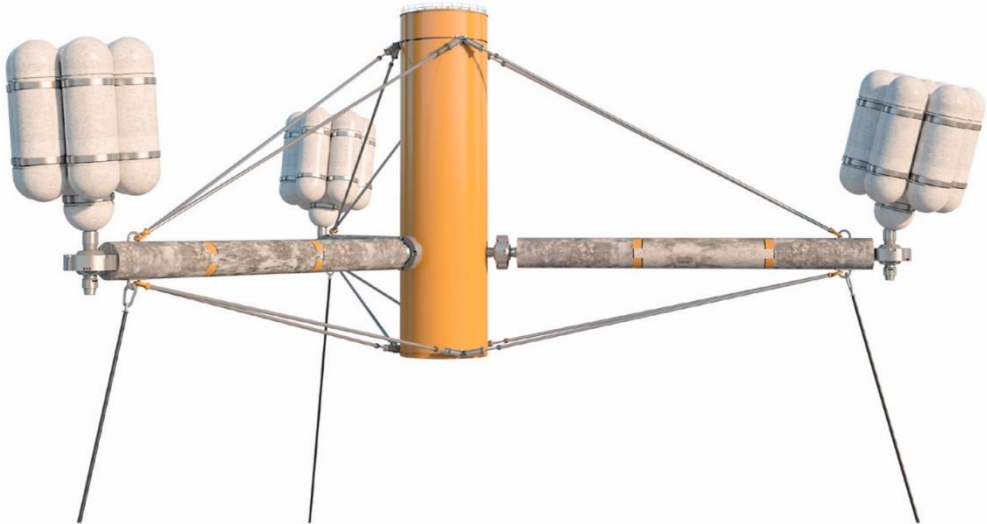


Figure 1: Image of the USFLOWT10 from NREL.

5.1.2 University of Maine

University of Maine has been developing concrete floating foundation technology for floating wind since 2008, has received over 70 patents, and has been working on industrialization approaches with many leading concrete contractors for the US and European markets.

University of Maine is advancing the VoltturnUS + damped concrete barge technology under development by the US ARPA-e Atlantis program which will fund a 1/4 scale demonstration in 2024.



Figure 2: VoltturnUS+ Hull Technology (image credits Universtiy of Maine)

The barge has a damping system to reduce the motions of the barge structure to an acceptable level for turbine OEMs. The concrete barge is designed to be industrialized using serial slipforming techniques to achieve production rates.

This technology builds upon the successful commercialization of the VoltturnUS Semi-submersible technology which was demonstrated offshore in 2013 in the USA. This was the first concrete floating wind turbine deployed globally and the first floating wind turbine in the USA.

5.2 Data Sharing

This competition is jointly operated by ORE Catapult and Innovate UK (each an “agency”).

Any relevant information submitted and produced during the application process concerning your application can be shared by one agency with the other, for its individual storage, processing and use.

This means that any information given to or generated by ORE Catapult in respect of your application may be passed on to Innovate UK and vice versa. This would include, but is not restricted to:

- the information stated on the application, including the personal details of all applicants
- scoring and feedback on the application
- information received during the management and administration of the grant, such as Monitoring Officer reports and Independent Accountant Reports

ORE Catapult are directly accountable to you for their holding and processing of your information, including any personal data and confidential information. Data is held in accordance with their own policies. Accordingly, ORE Catapult will be data controllers for personal data submitted during the application.

5.3 Next Steps

Following the completion of the Application phase of the project, ORE Catapult will notify the successful and unsuccessful companies as outlined in the timelines above. ORE Catapult will provide you with all documentation required to start your project.

5.3.1 Grant Offer Letter and Personnel

You will be required to provide the name and contact information of your Project Manager and Project Finance Lead. ORE Catapult will issue you with a Grant Offer Letter (GOL). **The terms and conditions of the GOL are non-negotiable. The project should not start until the start date outlined in your GOL.**

5.3.2 Finance Checks

We will carry out checks to make sure you are an established company with access to the funds necessary to complete the project. You must respond to any requests we have sent for additional information to avoid any delays. Failure to comply with this may result in your grant offer being withdrawn.

5.3.3 Funding Claims and Project Monitoring

Once the project has commenced you will be expected to attend review meetings with ORE Catapult, and from time to time Innovate UK, the review meetings will take place in, up to, monthly intervals. These meetings may be held in person if requested by ORE Catapult.

5.4 Unsuccessful Applications

If you are unsuccessful with your application, ORE Catapult will provide you feedback within 30 calendar days of notification being given. It is possible that you may have scored well and received positive comments. However, you may be unsuccessful because your average score was not above the funding threshold or your project has not been selected under a portfolio approach being taken within the funding competition.

5.5 ORE Catapult facilities for testing and demonstration

To avoid conflicts of interest, in the case of projects that wish to utilise ORE Catapult facilities for demonstration activities, the lead partner will subcontract ORE Catapult Development Services Limited (ODSL) to provide facilities access under the following conditions:

- ODSL will be treated as a subcontractor for the project that applies for funding from the FLOWB Programme.
- Applicants should follow procurement process as they would with any other contractor and in line with any requirements stipulated within the Grant Offer Letter.
- If ODSL is selected as a sub-contractor for the project, ODSL will assist you in defining the work packages and proving the costs of each work package, however, no other support can be provided towards the preparation of the Application, such as writing or reviewing the Application before submission.
- If you choose ODSL as a sub-contractor for the you must state this clearly in your application. Your Application will only be assessed by external independent industry assessors and will not be evaluated by OREC's internal assessors. This is to ensure a fair and impartial assessment process and will not negatively affect any Application scoring.
- If you choose ODSL as a sub-contractor for the project, your Application will be treated in the same manner as any other Application and no preferential treatment would be given to your project in the assessment process.
- Any economic activity carried out by ODSL shall be carried out on market terms and ODSL shall not offer any incentives to you which are not otherwise available out with the FLOWB Programme

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