
*TECHNOLOGY, INNOVATION AND GREEN
GROWTH FOR OFFSHORE RENEWABLES
(TIGGOR)*



**TECHNOLOGY DEMONSTRATION PROGRAM
FUNDING CALL 2020**

SCOPE AND GUIDANCE FOR APPLICATION

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1 North of Tyne Offshore Wind Innovation Programme

1.1 Offshore Wind Sector Background:

As part of the offshore wind sector deal announced in 2019 the UK Government set ambitious targets to grow the current 9GW installed offshore wind capacity to 40GW by 2030, which will be critical to achieving UK Government Net-Zero 2050 carbon reduction targets. Such a dramatic increase in deployed offshore wind generation will require a step change in the provision of support to ensure that the UK can maximise the supply chain opportunities in offshore wind farm development including areas such as: composite materials, novel turbine subcomponents, new foundation designs or next generation electrical subsystems/cables. In addition, further development of UKs leading position on subsea technologies, including robotic technology and seabed intervention equipment will be critical for wind farm survey, development, installation and O&M. The estimated potential investment value into the UK economy is over £40 billion by 2030.

1.2 North of Tyne Sector Opportunity:

The North of Tyne region has a critical mass of world leading offshore engineering/manufacturing, subsea technology and digital/technical consultancy services companies. The North East LEP recently commissioned a North East offshore wind supply chain study by Cambridge Econometrics which identified well over 100 companies currently active in the sector and outlined with further strategic development, the number of jobs existing in the sector could reach 4,600 jobs and generate up to £180m in GVA by 2030 for the regional economy. The North of Tyne also hosts a significant number of regional employers which are part of the Energi Coast cluster exporting products and services internationally for wind farm project developments in the USA, China, Taiwan and Europe.

1.3 TIGGOR Programme

The Technology, Innovation and Green Growth for Offshore Renewables (TIGGOR) Programme is a regional North of Tyne programme to accelerate technology/service development and new product entry into the offshore wind supply chain. The aim is to maximise future commercial investment in the supply chain via a technology demonstration programme to de-risk future investment. This supply chain innovation call will focus on priority technology themes including:

1. O&M reliability optimisation and AI:
 - 1.1. Demonstration of next generation sub-components, including novel component designs for floating wind, novel materials for offshore application.
 - 1.2. O&M tools, enabling Condition monitoring via Artificial Intelligence and Machine Learning techniques, novel sensor technologies, data driven failure mode detection to reduce O&M costs.
2. Smart O&M Robotics: Novel robotic technologies for subsea inspection, survey and maintenance. This could include ASV, ROV, AUV and novel applications of Drone technology for windfarm inspection and repair.
3. Digitisation and Application of Digital Twins: development of digital clone technologies on either component or wind farm level to enable improved offshore asset performance and operations.
4. Open Category: Includes and is not restricted to, long distance cable monitoring and protection, Cable failure prediction, Dynamic cable reliability, hybrid smart energy systems.

2 Aim

The purpose of the Innovation Call is to encourage a wide range of proposals across the breadth of the supply chain to fund projects that will ultimately lead to an increase in UK content and economic growth in the North of Tyne Combined Authority (NTCA) region.

This competition will support companies to develop new innovative solutions and intellectual property (IP) to meet the needs of the offshore wind sector and enable access to structured support programmes to improve business competitiveness within the supply chain. Successful applicants will be high growth companies that can make a marked contribution to UK offshore wind projects and maximize their export potential in the NTCA region following completion of their projects. The four technology themes selected are key priorities for the offshore wind sector and the innovation programme is receiving key technical advisory end-user advice from both EDF and the Equinor Dogger Bank O&M teams who will regularly review the successful projects.



3 Applicant criteria



This competition is open to companies registered in Newcastle, North Tyneside or Northumberland either currently working in the following supply chain areas or with a desire to enter this new market sector:

- Turbine Supply and novel subcomponents (Nacelle/Rotor/Tower)
- Robotics and O&M technology
- Electrical Infrastructure (transmission and storage technology)
- Next generation materials and design services
- Digital monitoring and analysis tools
- Sensor and condition monitoring technology

Companies working in other supply chain sectors are actively encouraged to apply providing the proposal demonstrates a clear innovative business case for offshore wind and there is evidence of potential engagement from an industrial end-user.

Projects must be delivered in the North of Tyne Combined Authority, although the programme will consider proposal consortiums which have limited advisory support from outside the region. To lead a project, organisations must be a NTCA region located business of any size, which includes Newcastle, North Tyneside and Northumberland local authority regions. The size of the organisation will determine the level of grant funding intervention.

It is strongly recommended that proposals include evidence of support from an end-user or an industrial sponsor clearly demonstrating a potential route to market.

4 Innovation Call Requirements

Funding Call	Offshore wind supply chain innovation
Objectives	<p>To enable companies to develop and deliver game-changing solutions that meet real industry challenges</p> <p>To support business improvement activities that will increase competitiveness within the supply chain</p>
Eligibility	<ul style="list-style-type: none"> • Applicants must be a NTCA-located company of any size (Newcastle, North Tyneside or Northumberland), currently or at the point of contract commencement. • Applicants must demonstrate existing or potential capability in the offshore wind supply chain. • Applicants must be able to demonstrate a clear business need or market opportunity for their chosen project. • Applicants are advised to provide evidence of support or sponsorship from an end-user in the offshore wind sector.
Scope	<p>Projects must focus on one of the four key thematic areas:</p> <ul style="list-style-type: none"> a) O&M reliability optimisation and AI b) Smart O&M Robotics c) Digitisation and application of digital twins d) Open Category
Activity Type	<p>Technology Demonstration Projects can be either within the following categories:</p> <ul style="list-style-type: none"> • Industrial Research (TRL 4-6) e.g. Technology testing and/or demonstration • Experimental Development (TRL 7-9) e.g. Prototype development. General Guidance on TRL levels can be located here: https://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/annexes/h2020-wp1415-annex-g-trl_en.pdf
Project Duration	Projects can be of 12 months to 18 months duration.

Eligible Costs	<p>Your project's total eligible grant award should be between £100,000 and £500,000.</p> <p>For industrial research projects (TRL 4-6) applicants may receive funding for eligible project costs of:</p> <ul style="list-style-type: none"> • up to 60% if applicant is a small - medium-sized business • up to 50% if applicant is a large business <p>For experimental development projects (TRL 7-9) applicants may receive funding for eligible project costs of:</p> <ul style="list-style-type: none"> • 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 <p>The EU definition of micro, small, medium and large businesses can be found at https://ec.europa.eu/growth/smes/sme-definition_en</p>
Funding Type	Funding will be provided in the form of a grant – quarterly in arrears for all eligible project costs incurred.
Registration Opens	Monday 20 th October 2020
Application Opens	Monday 9 th November 2020
Full stage Closes	Friday 15 th January 2021 at 5pm
Notification of Award	Tuesday 16 th February 2021 at 5pm
Project Start	All projects must be ready to start on or before 1 st April 2021, with agreed match funding and a project plan.

5 Definitions

The following terms shall have the meaning as described in the Definitions shown below:

Term	Definition
Applicant	A North of Tyne based supply chain company that makes an application to the OREC for funding or support.
Assessor	An OREC appointed external independent assessor that reviews the Applications. Applications will be matched with assessors depending on the subject area/theme of the application and the expertise of the assessor.
Grant agreement	<p>An agreement which will be signed between the successful applicant and the OREC. Under this agreement, the applicant will agree to implement the Deliverables as outlined in the Programme of Activity and Project Management Plan.</p> <p>OREC will agree to make available the funds to the applicant to deliver the project in arrears upon evidence of deliverables and expenditure.</p>
Deliverables	The agreed set of specific outputs from the project.
Delivery Partner	A service provider who can provide specialist knowledge/expertise to the Applicant during the project.
Eligible Costs	Relevant research project costs for the technology demonstration call which should be line with state aid guidance (GBER Article 25).
Project Budget	The total budget for the project including eligible costs and company contributions.
Match Funding	Company match contribution to eligible project costs which can be evidenced via financial audit.

6 Eligibility

6.1 Lead Organisation

- To lead a project, the Applicant must meet the following criteria:
- Have an office or facility location in Newcastle, North Tyneside or Northumberland (or be setting up in one of these areas prior to project commencement.)
- Show a clear intent to develop their business further in offshore wind.
- Show a clear alignment with the thematic theme areas selected.
- Show a clear intent to develop and exploit new technology, services or IP around offshore wind.
- Demonstrate a clear capability to develop a product or service.
- Show a clear intent to grow the business in terms of turnover, jobs, exports and IP.
- Provide match funding contribution to the total project costs (See Eligible Costs in Section 4).
- Make only one submission per company.
- Demonstrate how this project would not take place without NTCA funding support.

6.2 Project Team

For innovation-led projects, we strongly recommend that you seek support or sponsorship from an existing potential offshore wind supply chain end-user to ensure your project meets industry requirements and/or solves a real industry challenge. Evidence of such support should be included in your application.

If an applicant does not make a substantial effort to exploit the award in line with the grant agreement, the OREC reserves the right to award no more funding to the applicant in this, or any other OREC programme.

7 Scope

The aim of this competition is to support existing NTCA supply chain companies to grow their market share through increased competitiveness and the development of new technologies, products, and services. Companies are invited to submit applications for projects that are highly innovative and deliver new solutions to the sector or focus on implementing new processes to improve business competitiveness.

7.1 Supply Chain Areas

Grants will be awarded to companies for projects that focus on the specific call technical thematic areas and lead to improved competitiveness within the supply chain.

The scope for the Call is intentionally broad to encourage applications across the breadth of the supply chain. As such, OREC welcomes applicants from the following supply chain areas:

- Turbine Supply and novel subcomponents
- Robotics and O&M technology
- Electrical Infrastructure (transmission and storage technology)
- Next generation materials and design services
- Digital monitoring and analysis tools
- Sensor and condition monitoring technologies

If your project does not fit within thematic technology demonstration criteria, please contact the team prior to submitting a full Application to ensure it is within scope.

7.2 Demonstration of Project Impact

OREC will monitor successful projects and track progress in line with forecast outputs and key performance indicators for the programme. Projects must be able to deliver short-term impact.

Due to the wide scope, the Call is anticipated to be extremely competitive. Therefore, within your application you should clearly demonstrate:

- The main motivation for the project, detailing the technological challenge and/or market opportunity.
- How you intend to respond to the challenge and where the focus of the innovation will be.
- How the project fits with your current product or service offerings.
- How it will make you more competitive.

- The nature of the outputs you expect from the project and how these will have a clear economic impact in the NTCA region.
- The expertise of the project team in relation to your approach to the project, highlighting any gaps.
- The resources, equipment and facilities needed for the project and how you will access them.
- Your target market(s), the structure and features of the market(s) and predicted growth rates.
- The main work packages of the project, milestones and deliverables as part of a project plan.
- Your approach to project management, identifying any major tools and mechanisms you will use to get a successful and innovative project outcome.
- The main risks and uncertainties of the project and how you will mitigate these.

If you need support finding a project partner, please get in touch with the OREC Programme Team at tiggor@ore.catapult.org.uk who can help you find suitable companies and also direct you to the appropriate representative within regional Cluster.

7.3 Project Categories

We will fund industrial research and experimental development projects at set GBER allowed intervention rates (see Activity Type in Section 4)

7.4 Projects that Cannot be Funded

We are not funding projects:

- That do not focus on improving competitiveness and/or developing game-changing solutions.
- That are not led by an NTCA based supply chain company.
- From companies that cannot clearly demonstrate a business case or market opportunity.
- From companies that cannot demonstrate a match funding contribution.
- That will not be ready to start by 1st April 2021.

8 Application Process

The Innovation Call has an optional registration of interest, and an application process in which companies and consortia can apply for the funding.

8.1 Registration of Interest

Applicants are invited to register interest by completing the webform available at <https://ore.catapult.org.uk/research-innovation/strategic-programmes/tiggor/> or to write directly by email to tiggor@ore.catapult.org.uk. The registration form consists of a short series of questions that will enable OREC to support the application and to determine the project's eligibility e.g. is the applicant developing a technology/service against a specific call thematic call area and location of activity in the NTCA region.

8.2 Application Pack

In early November, we will make the application pack for the Technology Demonstration Program available via the website link below :

<https://ore.catapult.org.uk/research-innovation/strategic-programmes/tiggor/>

The application pack will consist of this guidance document, the application form and a finance form. The full Application form is available to complete and submit by the call deadline 15th Jan 2021. This will include questions in the following core areas:

- What is the background to your business and what product or service are you developing in the offshore wind market?
- What is the business opportunity or challenge that your project addresses and what is the size of the potential market?
- If your project is innovation led, what approach will you take and where will the focus of the innovation be?
- How are you going to effectively manage and deliver this project?
- How will this project support the growth of your business following Covid-19 in terms of turnover, jobs, and exports? What will the wider supply chain impact in the North of Tyne region be?
- Have you identified an offshore wind end-user to support/utilise your project outcomes? If yes, please tell us about this company and the value to them. For example, why would they use or buy your product?

Each question will have sub questions to help the applicant formulate their response. Applicants will also be required to complete a Finance Form and submit along with their application to outline eligible

costs (in line with a specific set of guidance). The final application forms plus any supporting material must be submitted to tiggor@ore.catapult.org.uk no later than 5pm on 15th January 2021.

In case of any information which the assessors deem to be unclear or requiring further information, then there may be questions submitted to the applicant which will then be included within the scoring.

9 Evaluation

Applications will be reviewed by the OREC Programme Team to ensure the project is within scope and meets eligibility criteria. Applications will be scored against the following criteria:

Criteria	Weighting	Guidance
Company background and relevance to this call	20%	An applicant must have relevant experience or be well suited to delivery in the offshore wind sector and display a strong knowledge of the market.
Clear innovative technology opportunity	30%	An applicant must show a clear understanding of the challenges it is trying to solve with use of the NTCA funding in relation to wind farm challenges
Appropriate approach and focus (delivery)	20%	The proposed solution must be well-suited to the challenge with a well-defined approach. Project delivery plan, risk assessment, change process, financial reporting. Key deliverability of the proposal in terms of financial management and technical capacity will be assessed.
NTCA impact and jobs and exports	30%	An Applicant must indicate how funding will support the company's regional impact in terms of jobs and business growth. Clear value for the grant funding should be demonstrated.

Full applications will also be reviewed by external assessors to provide an independent view of the information provided by Applicants (this will also include a financial due diligence check).

10 Key Dates

The following table provides a list of key dates for this Call:

Event	Date
Registration Opens	20 th October 2020
Application Opens	9 th November 2020
Online Briefing Event (Webinar)	23 rd November 2020 (General Session) 25 th November (Technology Demonstration Program)
Full Application deadline	15 th January 2021
Applicants notified	16 th February 2021
Aim project contract start	1 st April 2021

11 Submission Guidance

The application form is available for an online application via the programme website at the link below :

<https://ore.catapult.org.uk/research-innovation/strategic-programmes/tiggor/>

Applicants will also be able to submit this form to tiggor@ore.catapult.org.uk until the stated application deadline.

The full Application Form (pdf) and Finance Form (xls) will be available via the website. Applicants will be able to submit the PDF Application Form and Finance Form spreadsheet, along with any attachments (Appendix) until the stated Competition closing date and time by email.

A confirmation email will inform the sender that the submission has been received.

11.1 Application form

The Application Form is a PDF Form. It is recommended that Application Forms are completed using Adobe Acrobat software. Applicants should answer all questions and be aware that applications are assessed based only on what is provided by the Applicant.

Please refer to the bullet points in Section 7 of this scope and guidance document for additional content we would expect to be outlined within your application. Where applicable, numerical or quantitative answers will be looked on favourably.

11.2 Finance Form

The Finance Form is an Excel spreadsheet that can be edited with Microsoft Excel or Google Sheets and is required as part of the full Application. Applicants should complete only highlighted cells in the Project Cost Summary Form.

Providing OREC with project costs allows the Assessor to understand the financial structure of your project and to allow the Applicant to prove it is providing the necessary contribution to project costs. The level of contribution depends on the size of the organisation (see Eligible Costs in Section 4)

The Project Cost Summary Form starts with a summary section that will auto calculate from the entries provided by the Applicant throughout the rest of the form. The information required from Applicants is as follows:

- Labour costs per employee involved in the project, with an internal actual daily cost for employing each individual. This must include the cost of employment and not a commercial day rate.
- Overheads for employees, which will be auto calculated and set at a flat 25% for all Applicants
- Materials costs, including any consumables or small pieces of equipment that must be purchased in order to undertake the project

- Subcontractor costs of any service providers that must be procured in order to undertake the project
- Travel and Subsistence costs or estimates of what they may cost in order to cover necessary travel for the project personnel during project delivery.
- Any other costs which may not have been captured elsewhere in the form.

Note that funding is through a grant and some evidence of incurring costs will be required from successful applicants. Eligible costs are **net of VAT**.

11.3 Appendix (Supporting Material)

You can 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 five pages long. The font must be legible when printed on A4-sized paper.

12 Delivery

12.1 Applicant Responsibilities

Successful applicants will be required to:

- Provide an internal champion or Project Manager to own the relationship with OREC and manage the agreed Programme of Activity devised by the Applicant
- Commit internal resource to deliver the project, as agreed by the Applicant and OREC
- Take responsibility for the management and delivery of their project, ensuring that evidence of deliverables is provided to OREC in advance of grant payments
- Manage any sub-contracting agreement with project partners (if applicable). OREC will contract directly with the lead applicant
- Report to OREC on successful results and major business milestones following engagement with OREC
- Provide feedback to OREC Programme Team on this funding call
- Be open to publicity about participation in the TIGGOR Programme

12.2 Funding

Funding will be allocated to successful applicants in the form of a grant. Grant payments will be made to the lead organisation based on the completion of deliverables and evidence of expenditure at agreed quarterly review dates. All payments will be made quarterly in arrears in line with specified terms and conditions.

Funding will be paid on all eligible project costs **net of VAT**.

13 Confidential Information and Intellectual Property

The business information you provide in your online Application will be kept strictly confidential and will be used solely by OREC and independent technical assessors for the purpose of this call.

It is the intention of the OREC programme team that a confidential and intellectually safe environment be created by the Call where Applicants will feel free to share their ideas and concepts without fear of plagiarism or impact on their secrecy. As a result, OREC will ensure that the Intellectual Property (IP) included in submissions to the Call and IP that will be developed during any subsequent phase is and will remain property of the provider, will be treated in confidence and exclusively for the purpose of assessing and evaluating the Call Application. If the Applicant does not want to share the outputs of its work with OREC, then in the application process there should be a clear statement on which information will be redacted.

All personal information or personal data supplied in relation to this application will be treated as confidential. It will also be subject to the General Data Protection Regulation [EU] 2016/679 ("GDPR"). ORE Catapult will request personal information or personal data for the purposes of this application where we have a legitimate interest in doing so in order to assess whether the applicant meets the requirements.

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