

## TECHNOLOGY CHALLENGE THEME: FUTURE ENERGY SYSTEMS

### Challenge Background

Rapid, exciting and fundamental change is happening across the entirety of the UK’s energy system as we transition towards a Net-Zero future. The UK Government is currently working towards a world-leading climate change target to reduce emissions by 78% by 2035 compared to 1990 levels, which will increase to 100% (Net-Zero) by 2050. Achieving these ambitious targets will require harnessing energy from a variety of low-carbon sources, such as Offshore Wind, to power homes, businesses and vehicles. In addition to harnessing energy from a variety of low-carbon sources, significant investment and development of existing infrastructure is necessary to allow the benefits of the Net-Zero transition to be fully realised.

**Launch Academy 2024** is seeking innovative technologies and services that can in some way address, and contribute to the development and growth of the UK’s Future Energy System. In particular, Launch Academy 2024 is seeking innovative technologies and solutions targeting the ***Electrification and Decarbonisation of Vessel Operations*** and ***Shore Charging and Grid Maximisation***.

Examples of the types of innovations the Launch Academy 2024 programme is seeking to target through the **Future Energy Systems** theme include:

#### **Electrification and Decarbonisation of Vessel Operations**

- Battery-Electric Vessel Technology Solutions
- Alternative Fuel Vessel Technology Solutions
- Optimisation Solutions for Vessel Operations
- Novel Solutions addressing Health & Safety constraints relevant to Electrification/Alternative Fuel Vessels

#### **Shore Charging and Grid Maximisation**

- Battery Energy Store Systems (BESS)
- Modular Designs
- Energy Management Systems
- Novel Charging Infrastructure Solutions (Onshore and Offshore)
- Novel Port Infrastructure-Enabling Solutions

These solutions should look to maximise the capability of current infrastructure to facilitate the adoption of electrified or alternative-fuelled vessels to a point where confidence in the technology and its benefits to the industry can be proven, facilitating future widespread capital investment in the grid network and/or widespread development of significant new enabling infrastructure.

Please note that the list of examples given above is non-exhaustive, and all innovations that are relevant to the development of a net-zero, decarbonised Future Energy System with respect to Offshore Wind are considered relevant.

### Eligibility and Further Information

#### **Eligibility**

Entrants to this competition must be:

- Established businesses, start-ups, SMEs (Small-Medium Enterprises) or individual entrepreneurs

	<ul style="list-style-type: none"> <li>• UK-based or have the intention to set up a UK-base</li> <li>• Minimum of TRL (Technology Readiness Level) Four. See the link for further details on the TRL scale <a href="https://enspire.science/trl-scale-horizon-2020-erc-explained/">https://enspire.science/trl-scale-horizon-2020-erc-explained/</a></li> </ul>
<b>Assessment</b>	<p>Applications will be assessed on:</p> <ul style="list-style-type: none"> <li>• Applicability to the challenge</li> <li>• Innovativeness of the solution</li> <li>• Coherence of proposed business model and company vision</li> <li>• Feasibility and economic viability, including ability of the team to progress the solution</li> <li>• Development potential</li> <li>• Maturity of the solution</li> <li>• Ability to launch product and ease of implementation</li> </ul>
<b>IP &amp; Commercial Route</b>	<ul style="list-style-type: none"> <li>• Existing background IP associated with a potential solution will remain with Launch Academy Applicant(s)/Participant(s). Where any new IP generation is envisaged during the Launch Academy programme, it will be subject to the mutual IP agreement of the Launch Academy Participant(s) and Launch Academy Sponsors if jointly developed. If new IP is developed solely by the Participant then it will remain with the Participant.</li> <li>• Where necessary, a non-disclosure agreement (NDA) may be signed to uphold confidentiality in the engagement between the Launch Academy Participant(s) and Launch Academy Sponsors.</li> <li>• ORE Catapult does not take any share of IP ownership or enter commercial ventures through the Launch Academy programme.</li> </ul>
<b>Timescales</b>	<ul style="list-style-type: none"> <li>• <b>Application Window Opens:</b> 1<sup>st</sup> of November 2023</li> <li>• <b>Application Deadline:</b> 8<sup>th</sup> of December 2023</li> <li>• <b>Applications Assessment:</b> 8<sup>th</sup> December – January 5<sup>th</sup></li> <li>• <b>Shortlisted Applicants Invited to Pitch:</b> January 8<sup>th</sup></li> <li>• <b>Pitch Stage:</b> January 29<sup>th</sup> – February 9<sup>th</sup></li> <li>• <b>Selection and Notification of Successful Applicants:</b> 14<sup>th</sup> of February 2024</li> <li>• <b>Programme Start:</b> March 2024</li> <li>• <b>Graduation:</b> November 2024</li> </ul>