



**mjr**

Power &  
Automation

**MARINE | OFFSHORE | ENERGY**

**ZESTA 2023**

**Ryan Reilly**

**Business Development Manager**

**[ryan.reilly@mjrpower.com](mailto:ryan.reilly@mjrpower.com)**



**Headquarters  
Stockton-on-Tees  
TS17 9PP**



**40+ Full Time  
Employees**



**7% of turnover  
invested in R&D**

**Delivering marine electrical, power & automation system and services to the maritime, offshore & energy sectors for over 25 years.**

From new build assets & machinery to upgrade and retrofit with complete end to end engineered solutions.



**Unit 88:**

- Design & Engineering
- Software Development
- Controls & Automation
- Project Management
- R&D
- Administration

**Unit 85:**

- Production Management
- Construction and Testing
- Electronic Repair Shop
- Installation Services
- Mobilisation & Demobilisation
- After sales marine service



**TechnipFmc Deep Energy - Energy Storage Blackout Ride-Through System**



MJR Deliver Worlds First Supercapacitor Energy Storage System to Receive DNV-GL approval for Pipelay Blackout Ride through System

**Havilla Phoenix Upgrade Project**



Extensive electrical power systems upgrade for DeepOcean's multi-role offshore construction vessel Havilla Phoenix

**SS7 Normand Oceanic Back Deck Electrical Distribution**



MJR Deliver Design & Construction of Electrical Power Distribution for Back Deck Equipment Spread

**SS7 Pipe Handling System Power & Automation Upgrade**



MJR Delivers Drive Train Solution with Design, Construction, Installation & Commissioning for PIP Handling System Upgrade

**SMD Power & Automation Drive Train for 12te AHC Winch**



MJR Delivers Low Harmonic Deck Mounted Power, Drive, Automation & motors Solution for 12te AHC Winch with Operating Depth of 6000m

**Osbit /Jan De Nul - 1.2MW Power Vans for Subsea Trenching Vehicle**



MJR Deliver 2 x 20ft DVG-GL Approved Power Vans for Innovative Osbit Subsea Trencher, Swordfish



**Fire Shutter Control, Trace Heating Electrical & Automation System**



Delivery of Galoper OSP Platform Fire Safety Systems including Detailed Engineering Design, Class Approval, Installation, Commissioning & Acceptance Trials

**Off-Grid System - Floating Offshore Power Conversion System for 500kW Tidal Device**



Design, Engineering, Construction, Installation and Commissioning of 500kW Tidal Power Take off System with black Start and Off-grid Operation

**Sheringham Shoal Inner-array and Export Cable Packages**



Engineering & Project Management for Export & Array load Out, Installation, Termination and Testing . Including Transition Piece Cable Design & Outfitting

**1.5MW Power Take-off, Conversion and Control System For Wave Generator**



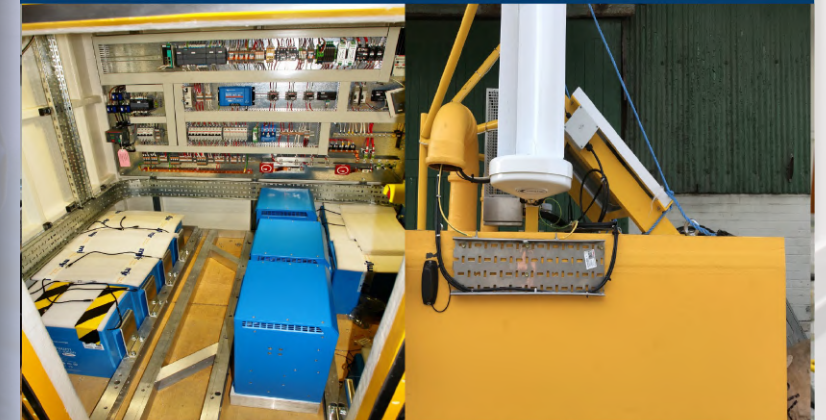
Turnkey Delivery for Power, Electrical & Controls of Power Take-off System for Innovative 1.5MW Wave Power Generator

**London Array - Cable Export & Array Engineering**



Preparation of offshore procedures for Export & Array Cable Load Out, Installation, Termination & Testing

**Offshore Microgrid System for Wave, Wind & Solar Power Generation**



Design, Engineering, Control s and Integration of Power Generation and Energy Storage for Offshore Power Buoy

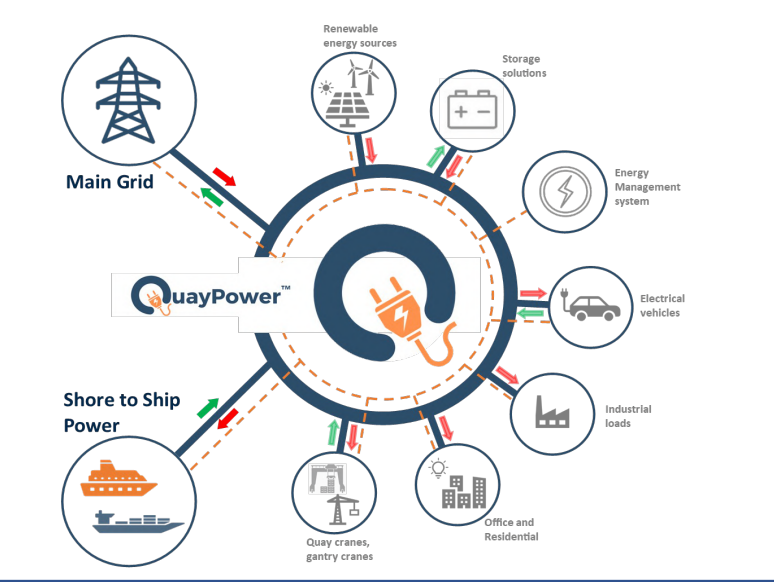


**Hybrid & Electric Propulsion**



- Power train
- Energy Storage
- Power Management System
- Integration
- New Builds or Retrofit

**Shore Power & Microgrid Solution**



- Shore to Ship Electrical Power
- Energy Storage
- Renewable Power Integration
- Energy Recovery
- Power & Energy Management

**Containerised Energy Systems**



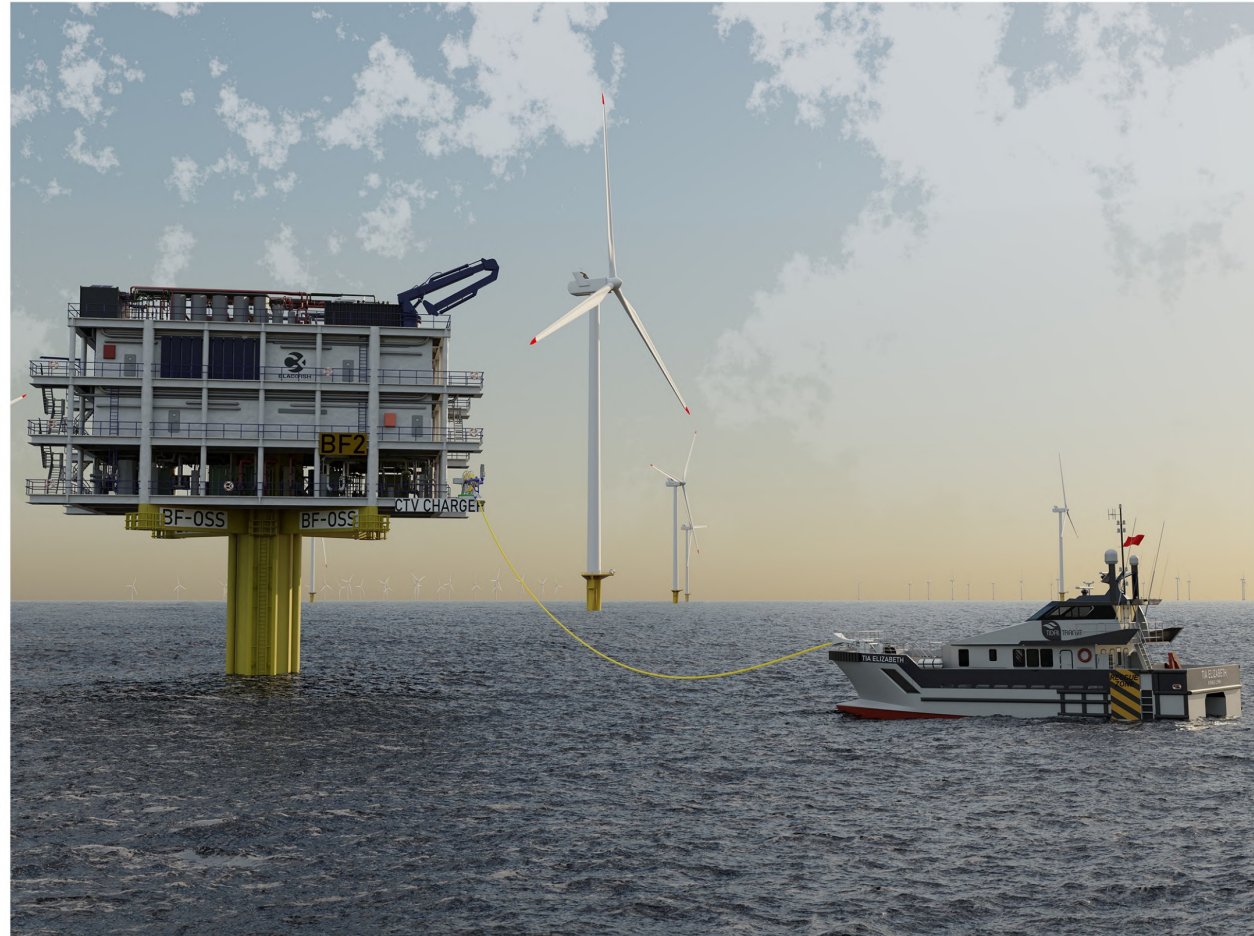
- Energy Storage System
- ISO & DNV-GL Containerised Solution
- Super Capacitors & Battery Systems
- Offshore and Port Applications
- Grid & Off Grid Systems

**Authorised Marine Partners**



Drives & Controls  
System Integrator  
Marine & Offshore





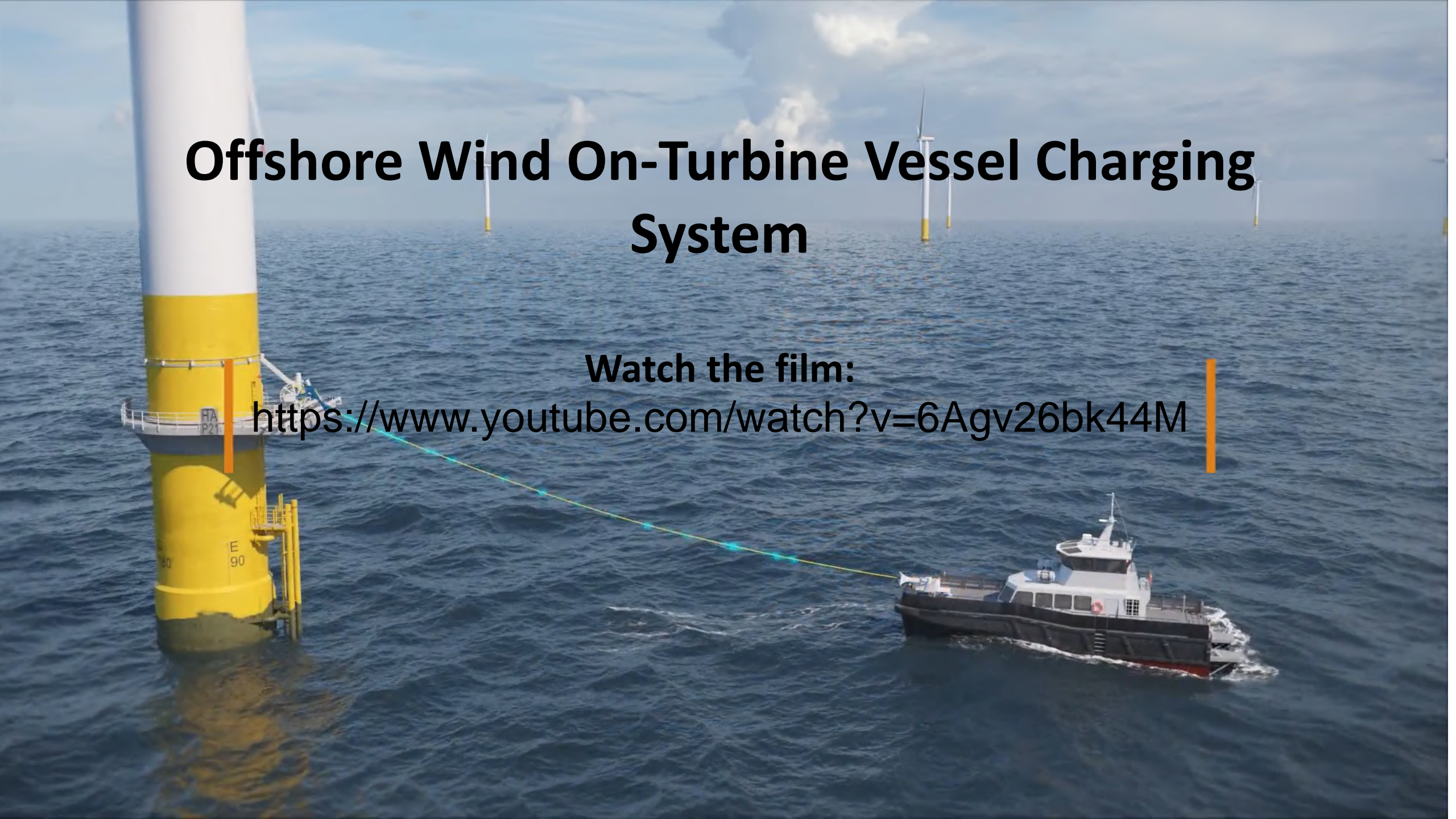
The CTV On Turbine Charging Project is part of the Clean Maritime Demonstration Competition, funded by the Department for Transport and delivered in partnership with Innovate UK.

Announced in March 2020, and part of the Prime Minister's Ten Point Plan to position the UK at the forefront of green shipbuilding and maritime technology, the Clean Maritime Demonstration Competition is a £20m investment from government alongside a further c.£10m from industry to reduce emissions from the maritime sector. The programme is supporting 55 projects across the UK, including projects in Scotland, Northern Ireland and from the South West to the North East of England. As set out in the Clean Maritime Plan (2019), Government funding has been used to support early stage research relating to clean maritime. The programme will be used to support the research, design and development of zero emission technology and infrastructure solutions for maritime and to accelerate decarbonisation in the sector.

# Offshore Wind On-Turbine Vessel Charging System

Watch the film:

<https://www.youtube.com/watch?v=6Agv26bk44M>





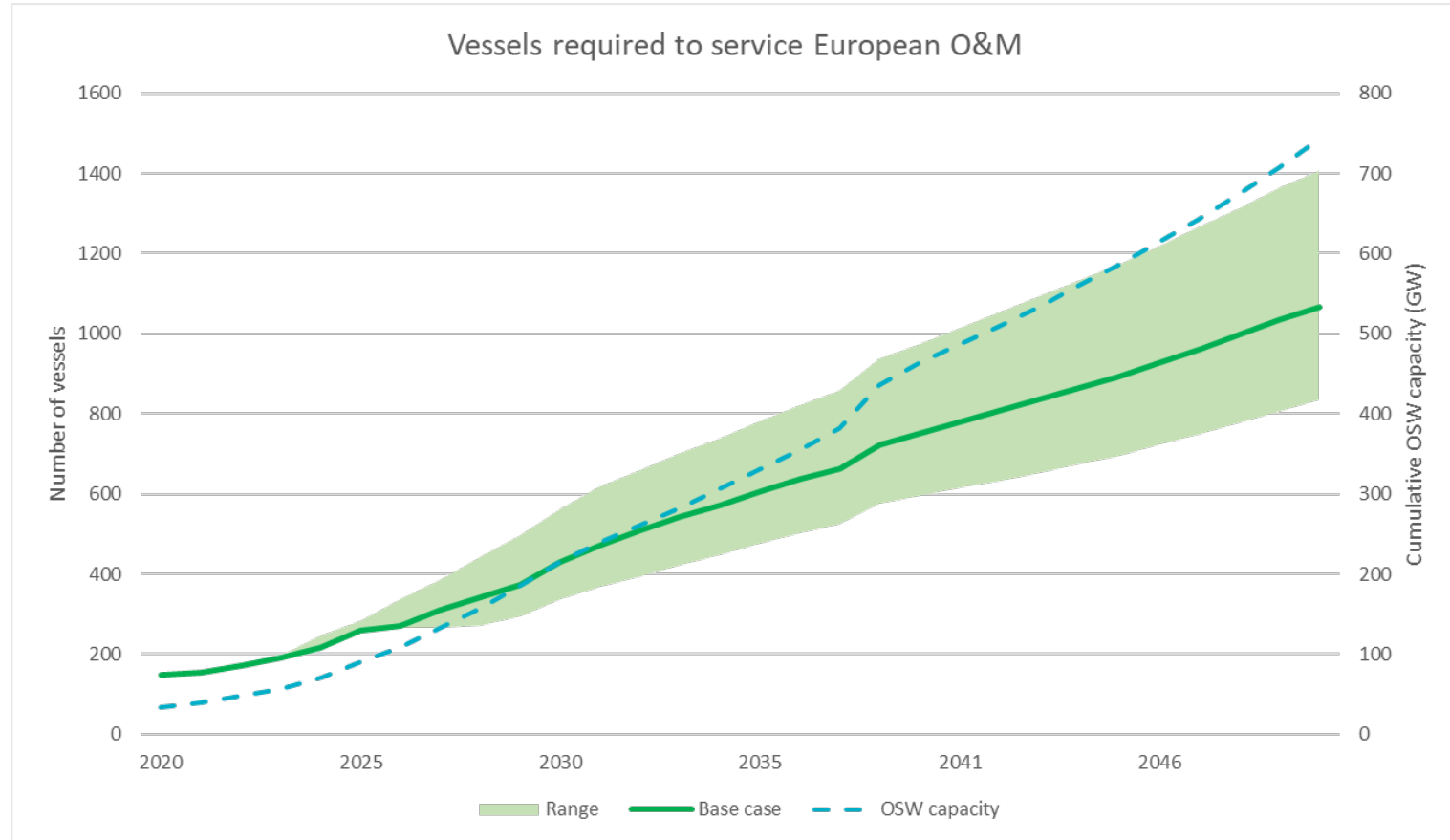
The SOV Offshore Charging System Project is part of the Clean Maritime Demonstration Competition Round 2 (CMD2) which was launched in May 2022, funded by the Department for Transport and delivered in partnership with Innovate UK.

As part of the CMD2, the Department allocated over £14m to 31 projects supported by 121 organisations from across the UK to deliver feasibility studies and collaborative R&D projects in clean maritime solutions. The CMD2 is part of the UK Shipping Office for Reducing Emissions (UK SHORE) flagship multi-year CMD2 programme. In March 2022, the Department announced the biggest government investment ever in our UK commercial maritime sector, allocating £206m to UK SHORE, a new division within the Department for Transport focused on decarbonising the maritime sector. UK SHORE is delivering a suite of interventions throughout 2022-2025 aimed at accelerating the design, manufacture and operation of UK-made clean maritime technologies and unlocking an industry-led transition to Net Zero.

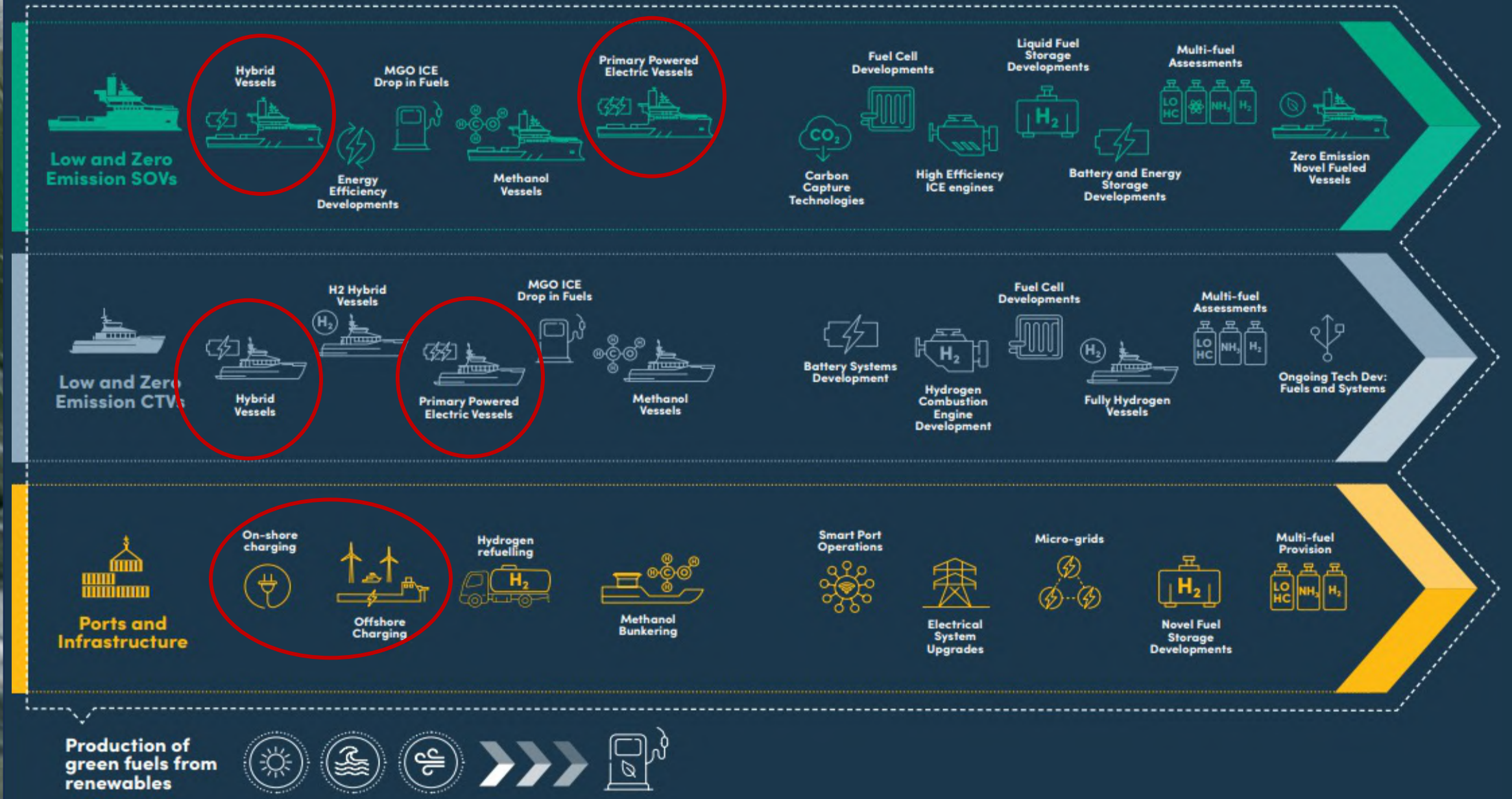


# Why ?

- Pull from OSW Owner/Operators.
- Early O&M net zero targets from Owner/Operators.
- Pace of OSW deployment driving maritime deployment need.
- None operating zero emission propulsion technologies.
- Significant opportunity for zero emission operations
  - Potentially requiring 1400 vessels by 2050 – a significant ramp up needed in the maritime sector to delivery installed capacity targets.



# Technology Roadmap



The background of the slide features a large offshore supply vessel in the center, with several wind turbines visible on either side. The scene is set against a sunset sky, with the sun low on the horizon, creating a warm, golden glow. The vessel has a complex structure with cranes and various pieces of equipment on its deck. The water is calm, reflecting the light from the sky.

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