

Project developing low carbon platforms for floating offshore windfarms secures £1m funding boost

A project supporting the development of floating offshore windfarm platforms in the Celtic Sea using low carbon steel has secured nearly £1m in innovation funding.

The Launchpad initiative, led by Swansea-based Marine Power Systems (MPS), will support the development of its platforms made from low Co2 steel sourced from Tata Steel UK's Port Talbot steelworks.

The collaborative project also includes Swansea University, Associated British Ports and Pembroke Dock-based engineering and fabrication company, Ledwood Engineering.

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The funding from Innovate UK, the UK's innovation agency, is backing MPS's pioneering floating offshore wind platform, PelaFlex for applications. The project also aims to ensure that the material sourcing, fabrication, manufacture, and product deployment is maximised through local supply chains.

PelaFlex is also paying particular attention to the challenging environment in the Celtic Sea whilst minimising both the cost of materials and deployment. That includes the use of strip steel manufactured in Port Talbot, the use of components fabricated by local suppliers and the assembly and roll out using existing ports in the south west Wales.

Graham Foster, MPS chief technology officer, said: “We are confident that through this project we will be able to optimise our platform design to increase the amount of local, low CO2 steel used for each platform from around 10% to over 50% – that could be as much as 50,000 tonnes of steel each year, based on ongoing supply into Celtic Sea floating wind projects.”

“With the deployment of floating offshore wind in the Celtic Sea becoming a reality, the time is absolutely right to work with local supply chain partners and top research establishments to optimise the detailed design of our technology and maximise its deliverability.

Tata Steel UK’s chief executive, Rajesh Nair, added: “We have a vision for our future low CO2 steels to be at the centre of a green industrial hub here in south Wales. Collaborations with industrial partners such as MPS demonstrate the huge potential benefits of producing green steels as well as providing security for local supply chains and the communities that surround us.”

Mark Davies of Ledwood Mechanical Engineering said: “The project represents another step forward for the emerging floating offshore wind industry. As a locally based engineering company, we are pleased to be working with MPS, Tata Steel, the Port of Milford Haven, ABP Port Talbot and Swansea University to help build a local supply chain by capitalising on the skills, expertise and infrastructure that we have here in South-West Wales. This is an exciting time for us and we hope the region can take advantage of the opportunities that will soon emerge.”

The Crown Estate, through its now live leasing round five, is inviting bidders to deliver three major floating offshore wind farms off the coasts of south-west Wales and the south-west of England. When completed they will have the capacity to power more than four million homes. The investment from successful

bidders is expected to create 5,300 jobs and generate a £1.4bn economic boost.

Swansea University will provide design input by applying the latest developments in structural design modelling, and Ledwood will provide feedback that will help maximise the extent to which fabrication can be supported from local suppliers. Associated British Ports and the Port of Milford Haven will ensure that the platform can be assembled and deployed from their respective Welsh ports.