

Interreg

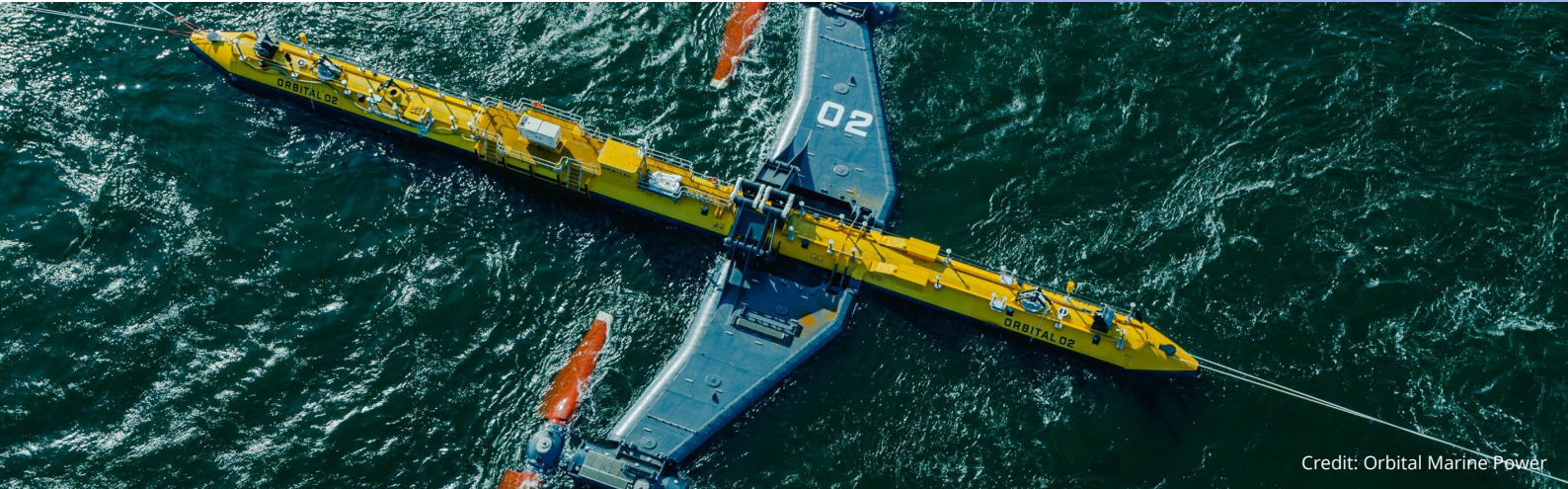


EUROPEAN UNION

North-West Europe

ITEG

European Regional Development Fund



Credit: Orbital Marine Power

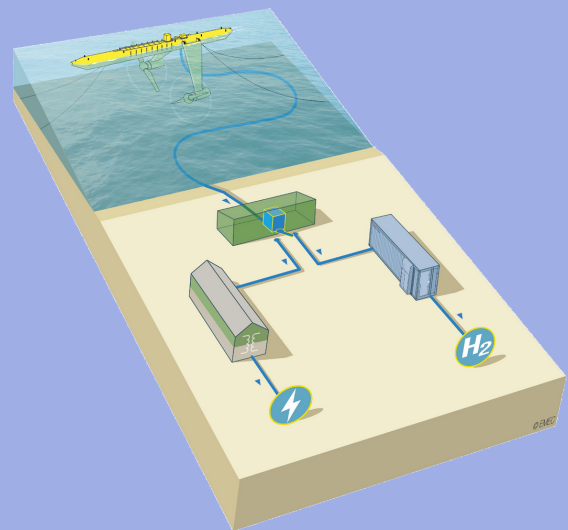
Project Overview

The ITEG (Integrating Tidal Energy to the European Grid) project will adopt three low carbon technologies to demonstrate a combined tidal energy and hydrogen production solution for clean energy generation in remote areas facing grid export limitations.

The integrated solution combines Orbital Marine's O2 2 MW tidal turbine with a custom built 500 kW Elogen electrolyser and a smart onshore energy management system (EMS) to be designed and installed at the European Marine Energy Centre (EMEC)'s hydrogen production site on Eday.

The EMS will enable EMEC to control whether the power produced by the Orbital O2 is fed into the national grid or into the Elogen electrolyser to produce hydrogen.

The graphic below illustrates how these three low carbon technologies will form an integrated tidal and hydrogen production solution on EMEC's Caldale site on the island of Eday.



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ITEG objectives

- Open market opportunities for the ocean energy sector through hydrogen production and energy storage
- Optimise the EMS and fast-track a clean energy generation, management and storage solution towards commercialisation
- De-risk future integrated energy generation and hydrogen production projects
- Build a roadmap supporting replication of tidal to hydrogen production solutions in other grid restricted areas



Elogen electrolyser



ITEG project consortium

Led by EMEC, the ITEG project consortium includes research institutions, regional development agencies, tidal energy and hydrogen infrastructure developers spanning four countries in North-West Europe: UK, France, Netherlands and Belgium.



Interreg North-West Europe Programme

Interreg North-West Europe is a European Territorial Cooperation Programme funded by the European Commission including eight countries of the region.

The objective of the programme is to encourage high levels of innovation, sustainability and cohesion between regions of North-West Europe, reducing socio-economic disparities.

The ITEG project has a budget of € 11m until 2022 and contributes to the programme's Low Carbon thematic priority.



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