THYMOTE

CHARACTERISING THE EDDY EFFECT OF TIDAL TURBINE SITES

Sites with strong currents where tidal turbines are deployed are mostly rocky in character and with complex morphologies featuring faults, strata and trenches. This is the case with the Raz Blanchard channel for example. The conjunction of strong currents and complex morphologies leads to the creation of eddy structures.

Turbulence has a significant impact on tidal turbine performance, life expectancy (fatigue due to effort and vibration) and slipstream characteristics. The development of the tidal turbine energy sector is dependent on precise characterisation of turbulence at tidal turbine sites.

The THYMOTE project is seeking to improve characterisation of turbulence at offshore sites using both numerical modelling and tank tests in order to study the influence of seabed roughness on turbulence. The complementary nature of these two methods will provide concrete answers to the issues facing industrial players in the MRE sector as regards tidal turbine dimensioning, performance and positioning.

The results of the THYMOTE project will provide a better understanding of the dynamics of eddy structures.

Partners

Companies

Dynamocean, Bégard
EDF R&D, Laboratoire National d'Hydraulique et Environnement (LNHE), Chatou
Engie, Lorient
Innosea, Nantes
iXSurvey, La Ciotat
Naval Group, Brest

Research centers

France Energies Marines / Université de Caen - LUSAC [Project Developer]
Ifremer, Brest
Université du Havre (LOMC), Le Havre

Funders

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