MEGAWATTBLUE®

SECOND GENERATION TIDAL TURBINE DEMONSTRATOR

The MegaWattBlue® (MWB) project involves producing a second generation tidal turbine demonstrator with an average capacity of 250 kW for a 4-m diameter rotor. The demonstrator will validate a type of nozzle which increases the speed of the current by 30-40% in the direction of the rotor, supplying power 2.5 times greater than that of a traditional tidal generator. Output is also optimised by the fact that the rotor/nozzle element can freely swivel in the direction of the current.

The more compact size of this tidal turbine compared to traditional models offers the potential to operate in new shallower waters which are therefore closer to centres of consumption. A test phase scheduled for the natural environment will assess the performance of this new design and will take place in the Etel River ria where currents can reach a maximum of 8 knots in 10 metres of water at low tide.

Similarly, to minimise maintenance costs associated with positioning and removing the tidal turbine, the project is proposing to approach vessels already operating in the area, thus favouring the involvement of local stakeholders.

Partners

Companies

Guinard Energies Nouvelles, Brest [Project Developer]
Bernard et Bonnefond, Saint-Étienne

Research centers

ENSTA Bretagne, Brest
Ifremer, Brest

Funder

FEDER, Conseil régional de Bretagne

Labelisation

25/04/2014

Overall budget

4 535 K€