

HYDROQUEST TIDAL TURBINE: END OF TESTS ON THE EDF SITE IN PAIMPOL BRÉHAT AND NEW STAGES OF DEVELOPMENT AT THE RAZ BLANCHARD.

Press release, the 5th of October 2021

Immersed at the EDF test site in Paimpol Bréhat (Brittany) since April 2019, the 1MW tidal turbine designed by HydroQuest and built by the Cherbourg shipyard CMN, was disconnected from the electrical grid during various operations carried out between April and early September. The operations to remove the machine and its foundation from the water were carried out at the end of September and the tidal turbine was transported to the port of Cherbourg. It will be inspected in the coming months.

Initially scheduled to last one year, the tidal turbine tests were extended for a further year to make the most of the experiment. The second year of testing was financed as part of the European TIGER project, "Tidal Stream Industry Energiser" (<https://interregtiger.com/>).

The quality of the infrastructure at the EDF site allowed HydroQuest to carry out the test programme under ideal conditions. These two years of continuous operation on the very demanding site of Paimpol Bréhat have notably enabled Hydroquest to certify the power curve of the tidal machine and to prove its robustness, with an availability close to 90%.

The characterisation of the marine tidal resource and the understanding of natural phenomena have also been significantly improved through the deployment. The assessment of the operations and the results of the technical and environmental measures will be presented in the autumn within the framework of the liaison group which brings together the actors and elected representatives of the Paimpol Bréhat area on an annual basis.



The development of marine tidal power continues with the FLOWATT project, a pilot farm at the Raz Blanchard in Normandy.

Thanks to the thousands of hours of operation accumulated on its demonstrator in Paimpol Bréhat, HydroQuest has designed a next generation of tidal turbine which is even more efficient and more powerful, whilst being lighter providing a competitive edge. These next generation tidal turbines will be deployed at the FLOWATT project, a pilot farm of 7 machines of 2.5MW of unit power at the Raz Blanchard, in Normandy.

The commissioning of FLOWATT is planned for 2025, subject to the support of the PIA (Programme d'Investissement d'Avenir) operated by ADEME, with the construction of the tidal turbines starting in 2023. The pilot farm will be operated for a period of 20 years and will produce 40 GWh/year, equivalent to the consumption of 20,000 people. This project contributes to the European Union's objective of 100MW of marine renewable energy, excluding wind power, to be commissioned by 2025.

The Hydroquest 2.5 MW tidal turbine that will be install in the Raz Blanchard



The FLOWATT project is the first step in the development of tidal power in the Raz Blanchard, which, with a potential of 3GW, has the largest tidal resource in the European Union and one of the best in the world. At the Raz Blanchard site, tidal power has the potential to produce about a third of the electricity produced by wind power installed in France to date and could supply about 2 million people with low-carbon electricity.

Tidal energy has many advantages that allow it to play a key role in the French and European energy mix. Including:

- Tidal energy is completely predictable, which guarantees reliable and predictable production throughout the life of the projects;
- Tidal turbines are fully submerged and do not generate any visual or noise impact. Their impact on the marine environment is very low;
- The turbines are essentially made of metallic materials and are easily recyclable over time;
- The social acceptability of tidal energy is good thanks to sites with high energy potential but small size (less than 40km² for all French sites).

In line with what has already been achieved for the Paimpol Bréhat demonstrator, HydroQuest and its partners are aiming for the emergence of a French tidal turbine industry with more than 80% of the value of the projects being realised in France. The French market represents approximately 10 billion Euros of investments, a very strong source of employment in France for the construction of projects and their maintenance is thus expected.

The development of marine turbines is an opportunity for France! Know-how and French Innovation.

About HydroQuest - www.hydroquest.fr

HydroQuest designs, manufactures and installs tidal turbine farms capable of producing electricity from marine currents. Founded in 2010 and based near Grenoble in the heart of the world's hydroelectricity cradle, HydroQuest has a portfolio of 9 international patents in partnership with EDF and Grenoble-INP, the basis of a high-performance technology that is unique in the world. With a team of 20 people, HydroQuest relies on the industrial expertise of its partner and main shareholder, CMN (Constructions Mécaniques de Normandie), Cherbourg.

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