

Qair

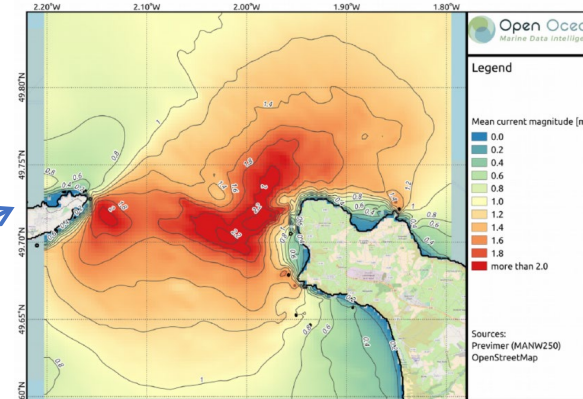
HydroQuest



FLOWATT, A TIDAL ENERGY PILOT PROJECT AT THE RAZ BLANCHARD

The French potential for tidal energy

The strongest potential of EU27



- 3,5GW for a production of 11 à 13TWh/year.
- This potential represents:
 - $\approx 1/3$ of the onshore wind power production on the whole French territory installed to date
 - The projected production of a nuclear EPR
- Raz Blanchard is one of the best sites in the world. 3GW of potential alone

Political ambitions for tidal energy



NORMANDY PLAN 07/2020

- Objective 1400GWh of tidal energy in 2030
- Represents ≈500MW operational in 2030
- Electricity production for 600.000 inhabitants



EU Strategy Offshore renewable energy 11/2020

- 100MW of installed capacity for oceanic energies by 2025 in Europe
- 1GW of installed capacity in 2030
- 40GW of installed capacity in 2050

PPE Objectives 2019-2023

- « *the government will closely monitor the demonstrator projects that are pursued, as well as the evolution of the sector's performance in the coming years* »...
- => PPE 2024-28 to revise to take into account Tidal Energy

The leaders of FloWatt, the Raz Blanchard tidal turbines project



HydroQuest designs, manufactures and installs tidal farms capable of producing electricity from marine currents.

French leader in marine tidal power with the successful 2-year test (2019 - 2021) of the 1MW OceanQuest demonstrator at the Paimpol-Bréhat test site. Project supported by the French agency for Energy ADEME.



- Founded in 2010 and based near Grenoble in the heart of the world's hydroelectricity cradle.
- Portfolio of 9 international patents in partnership with EDF and Grenoble-INP, the basis of a powerful technology unique in the world.
- A team of 20 people, which relies on the industrial expertise of its partner and main shareholder CMN, a shipyard based in Cherbourg for over 70 years.



Independent renewable energy producer, which has been developing, building and operating wind, solar and hydroelectric projects on its own account for over 30 years.

- Company present in 16 countries in Europe, Latin America, Africa and Asia
- Qair has 300 employees committed to the energy transition
- The Qair Marine subsidiary is in charge of the development of Renewable Marine Energies. Winner of the EolMed floating wind farm pilot project.

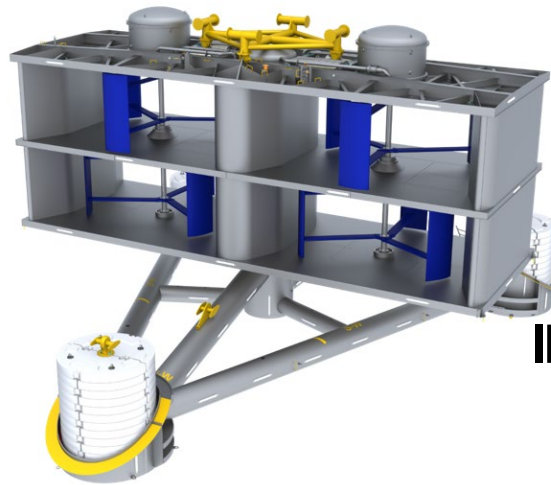
After the success of HydroQuest's first offshore project

From the unit 1MW test in Paimpol-Bréhat to the pilot farm in the Raz Blanchard

At Paimpol-Bréhat :

Main outcomes

- Power curve certified by Bureau Veritas
- 86% availability
- Thousands of hours of feedback for the design of the new generation tidal turbine



INNOVATION



At Raz Blanchard :

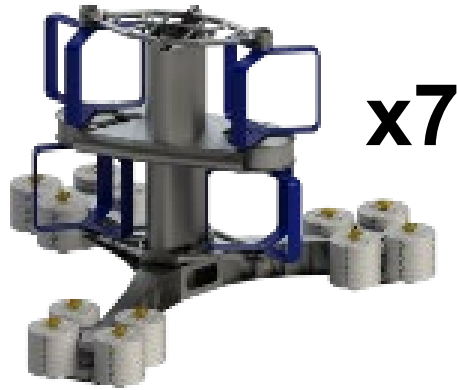
Next gen tidal turbine

- More powerful: 2,5MW
- Lighter
- Cheaper
- More efficient



The FloWatt project, a pilot tidal farm in the Raz Blanchard

Towards commercial development



Pilot farm site

- Area allocated in 2017, SPV "Parc Hydrolien Normandie Hydro SAS" purchased from EDF..

State aid support requested

- Application to ADEME « SEVTD » call for proposals

Main characteristics of the project

- 7 tidal devices of 2,5 MW = 17,5 MW, will be built by CMN in Cherbourg
- Average net production of 41 GWh per year (electricity consumption of 8,200 households or 20,000 inhabitants)
- Commissioning planned for 2025
- 20-year operating period
- Cost of electricity equivalent to floating offshore wind pilot projects

SPV Partners

- IPP



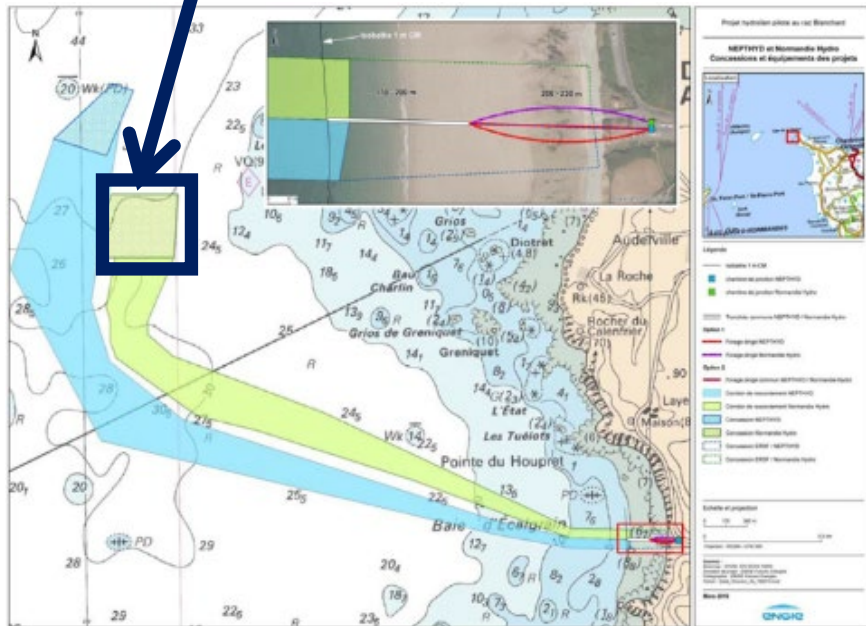
- Tidal turbines + foundations



- Local authorities (under discussion)



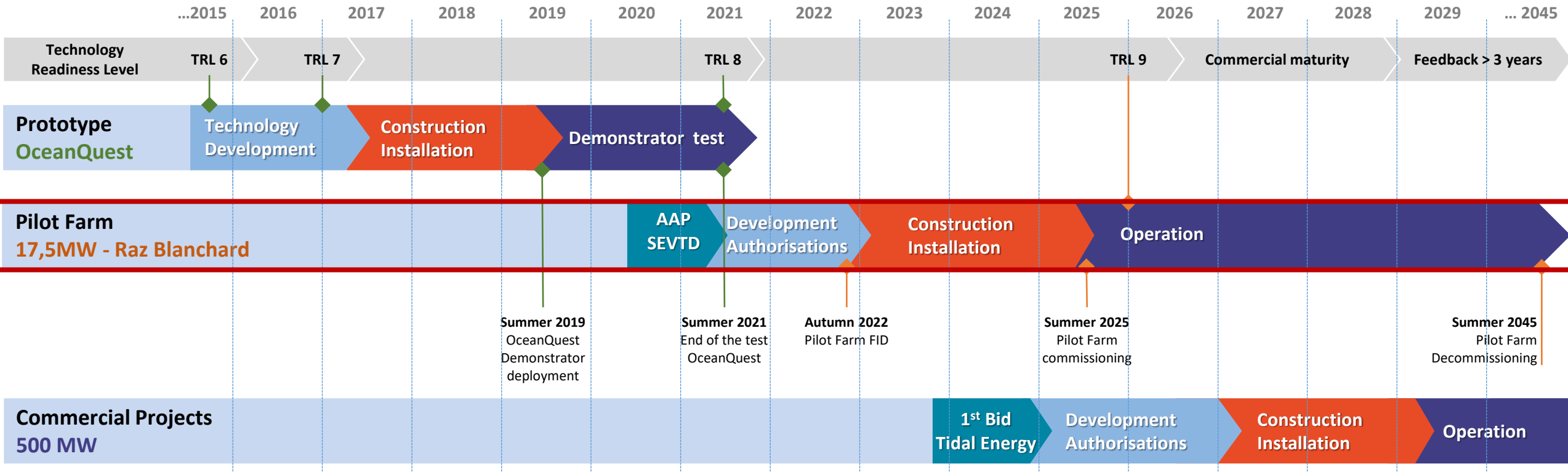
- Scientific partners



CONFIDENTIAL

FloWatt project development schedule

Commissioning in 2025



To sum up...

FloWatt, a tidal energy pilot farm at the Raz Blanchard, a pathway to 2025

- **Our 17.5MW pilot farm project in Raz-Blanchard with HYDROQUEST technology and the IPP QAIR already shows the competitiveness of marine tidal power compared to floating offshore wind power.**
- **Normandy's and Europe's ambitions for tidal power are clear and coherent.**
- **The French government still needs to be convinced** despite the high energy potential (11 to 13 TWh/year).
- Last but not least: **the economic impacts will be structuring in France and Europe** with the development of the tidal turbine sector at the Raz Blanchard
- To make this pilot farm project a reality:
 - A **feed-in tariff** has to be granted by the French authorities
 - A **“soft loan” from EIB** would help complete the project financing
 - **Insurance and warranty support from EU** would mitigate the costs