

# NEREHYD™

Engineering  
for new  
energies



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# DORIS & Lhyfe

DORIS and Lhyfe are proud to introduce the NereHyd™ technology, a smart solution that facilitates access to cheaper green offshore hydrogen by combining power production with hydrogen production.



**DORIS** is a leader in Engineering, Advisory and Project Management for Energy. We make conventional energies cleaner. We make renewables and new energies possible. The DORIS teams design and manage energy production developments with the highest respect of environment and life through the integration of the most efficient technologies.



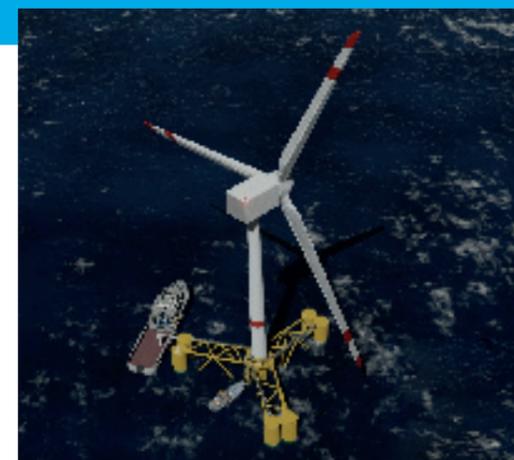
## H<sub>2</sub>

**Lhyfe** designs, builds and operates renewable hydrogen production facilities. The Lhyfe team is composed of experts in hydrogen from innovation and research fields. In addition to the existing onshore facilities, Lhyfe is deploying its industrial process offshore to provide a solution for a growing demand.

# Offshore green hydrogen

## NEREHYD™

NereHyd™ produces green hydrogen offshore using DORIS' floating wind platform NereWind™.



With 20 years of expertise in offshore wind, DORIS brings a competitive, versatile and efficient semi-submersible portfolio of designs named NereWind™.

NereHyd™ combines Lhyfe's renewable hydrogen production expertise with DORIS' floating wind turbine solution NereWind™ to produce green hydrogen in offshore areas at competitive cost.

A unique design considering:  
Optimized industrialization; Patented Attenuation Chambers; Steel, Concrete or Hybrid Alternatives adapted to local capabilities; Largest Turbines.

### Optimized Control

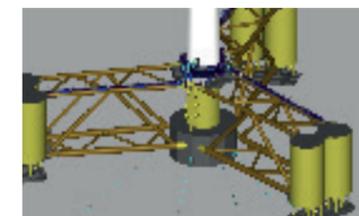


NereHyd™ is optimized to support the largest wind turbines available on the market. It has been designed with a focus on the supply chain, ensuring multiple local suppliers can fabricate components with the standard tools available at ports and yards.

The product is wind turbine and electrolyser agnostics, so it can be adapted to various technologies with minor changes.

Control of operational costs is key to achieving a suitable price for clean hydrogen. Centralized operations on NereHyd™ allow for centralised monitoring, optimised electricity usage and efficient remote operations.

### Smart Integration & Unmanned Asset



NereHyd™'s substructure integrates almost all of the technology's electrical and process equipment. This integration allows for a significant reduction in structural and architectural weight.

The technology is designed to be an unmanned facility. The IoT system is directly linked to a remote digital twin which brings a real-time tracking of asset's health. The IoT system is directly linked to a remote digital twin allowing for real-time tracking of the asset. This system provides predictive maintenance which is continuously reviewed and improved throughout the asset's lifetime.

### On-Grid and Off-Grid



NereHyd™ incorporates a hydrogen production facility into the floater of a wind turbine and can be deployed for on-grid or off-grid applications

NereHyd™ is adaptable to several grid scenarios:

- On-grid scenarios allowing for an optimum balance between H<sub>2</sub> production and power production.
- Off-grid scenarios allowing for cost effective large scale developments when resources are farshore and isolated from the grid.