TEST LINE #7

Production of H2 in off-shore environment

Technical data sheet

December 2025

H2shift

Test Line #7 is a powerful modelling platform supporting the planning and development of offshore wind farm projects, integrated advanced engineering modelling with financial and cost evaluation.

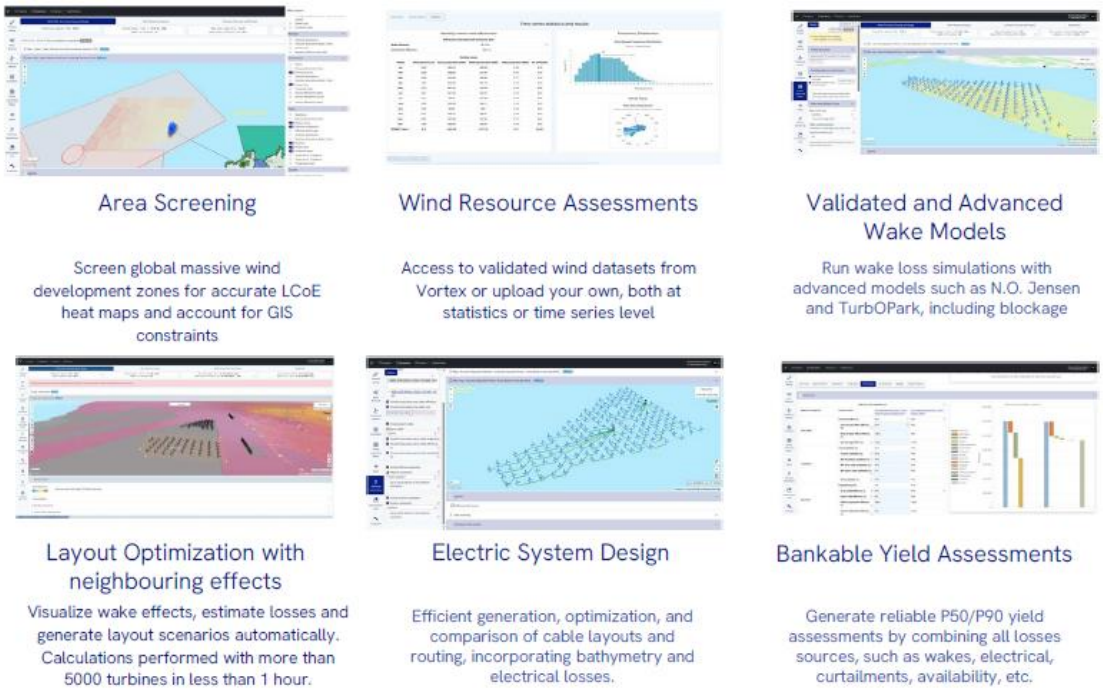
The platform can be expanded to integrate a Hydrogen module, which will include both the technical and economic aspects of hydrogen production within the offshore wind farm, adding a further element for more holistic evaluation of the business case for a wind farm with potential H2 production and storage.

Current capabilities

The platform accelerated the early phases of wind farm initiatives, from conception and green field assessments, site characterization with park design and advanced turbine layout optimization, down to installation logistics planning and optimization. Costs and yield are consistently traced and modelled to keep the business case updated regardless the loops of design involved in the design process.

Picture 1: Integrated Capabilities within Youwind platform

Picture 2: Technical features blocks for offshore wind farm design (I would add both, good choice!)



NB: taken from the corporate presentation

Integration of hydrogen production

The addition of the hydrogen module could include, but not limited:

- Advanced engineering modelling for sizing and performance of different electrolysers' technologies, including those in scope of H_2SHIFT project.
- LCOH simulation module with a bottom-up costing model approach
- Location selection of electrolyser according to main offshore wind farm components location, grid connection points and adapted to specific technology constraints.
- Financial and cost modelling integrated to the existing scenario analysis, which includes LCOH, to serve a holistic system revenue optimization, taking into account current and forecasted electricity pricing, in line with hydrogen market demands

Test line #7 therefore offers modelers and software developers the opportunity for developing a simulation module that can evaluate the LCOH, including the cost of installing and operating electrolysis, according to the inputs generated by Youwind's modelling platform.