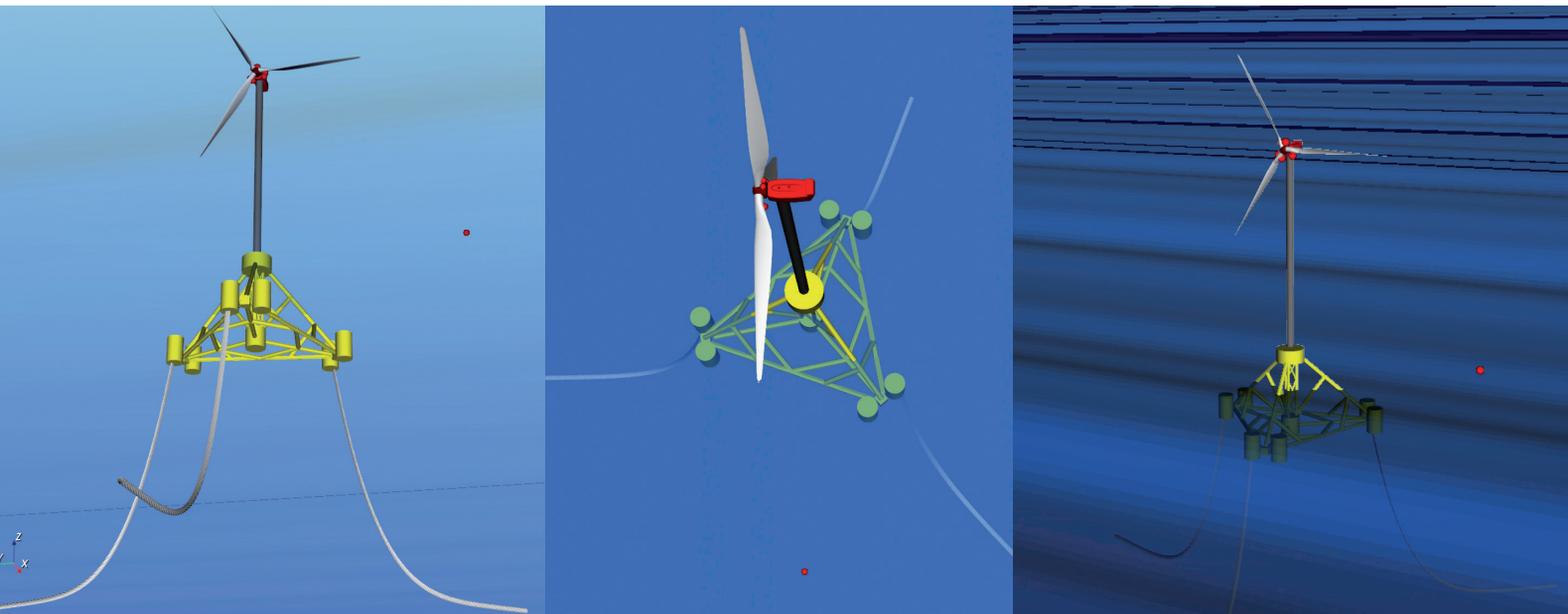


## Simulation tool to support design of floating units



Opera offers an independent and fully integrated modelling tool that includes all components of a floating wind turbine Source: Bureau Veritas

**OPERA** | Classification society Bureau Veritas has unveiled a digital simulation tool, Opera, to support the modelling, assurance and certification of floating structures, particularly floating wind turbines. The system incorporates all the components of a floating structure, from mooring systems to turbine blades.

The classification society claims that Opera will provide a range of design verification benefits including:

- › a complete understanding of floating wind projects and flexibility to cater for innovative design;
- › integrated loads analysis, taking into account all types of couplings;
- › providing accurate, reliable and fast responses to customer requests;
- › independent verification services;
- › support for design teams on technical issues.

The classification society's Laurent Leblanc, senior vice president Technical & Operations, said: "The development of Opera has been an amazing journey. We have built and improved our modelling capabilities over the years, in partnership with our clients. Today, we are in a position to perform any calculation to certify, give confidence, and help de-risk any floating offshore wind turbine project. Opera will enable greater access to sustainable energy generated from wind, helping the offshore industry sup-

port the transition to an era of green, low-carbon operations."

### First hybrid surface effect ship

In a separate move, BV has classed the 43-knot twin-hulled surface effect ship (SES), *CWind Pioneer*, equipped with a diesel and electric drivetrain and batteries. It is claimed to be the world's first hybrid-powered SES. The vessel, which has an air cushion motion control system, is operating for offshore service vessel company, CWind, and is now deployed in the *Borssele 1* and *2* wind farms in the Netherlands. It is capable of transferring up to 24 passengers to the offshore facilities in challenging environmental conditions and significant wave heights of up to two metres. BV's notation, 'Electric-Hybrid', takes into account the complexity of such power

systems. It defines requirements for energy storage, power distribution, control, instrumentation, and tests that must be carried out relating to power management and safety considerations, the classification society explained.

CWind managing director, Nathanael Allison, commented: "The success of the *CWind Pioneer* was achieved through years of research and development, resulting in the fastest, safest and most fuel-efficient crew transfer vessel on the market. By working together with industry bodies, including Bureau Veritas, our clients, Ørsted, and a range of highly qualified naval architects, shipbuilders and marine engineers, including our in-house team, we have managed to achieve something truly exceptional."



The *CWind Pioneer* is now deployed on two wind farms in the Netherlands Source: Bureau Veritas