

Tetrahedron winner of the Offshore Wind Innovators Award 2020

The prize for the most innovative project in the offshore wind industry in 2020 has been awarded to Tetrahedron. During the online TKI Wind op Zee live meeting 'Offshore Wind Innovators Award 2020' on March 30, the start-up was awarded with both the jury and the public prize.

This year, the jury of the Offshore Wind Innovators Award consisted of David de Jager (GROW), Jasper Vis (TenneT) and Nick Stokman (Rockstart Energy Fund). Based on their different expertise, the jury looked at the feasibility for financing, the impact on the offshore wind market and the degree of innovation. From the submitted proposals, they have selected three nominees.

Tetrahedron: lightweight crane to simply lift higher

Tetrahedron has designed a crane that can lift heavy wind turbine components up to 50 meters higher than conventional cranes. The crane is especially designed for offshore wind turbines. It has the shape of a tetrahedron, a 3D-triangle. In the opinion of the jury, "Tetrahedron is addressing the big issue around the limit number of heavy lift vessels available in the offshore wind market now. And especially in the future, with the development of new 15+ MW turbines. Tetrahedron is re-thinking heavy lifting by using a simple and new motion principle. As a result installation vessel lifetime could be extended and the need of investments in new ships could be avoided. The jury is pleased that Tetrahedron has been working closely together with the certification bodies and market since the very first moment. As the lifting industry is strong part of the Dutch offshore supply chain, this might mean a big opportunity for potential customers to improve the competitiveness and circularity of the existing fleet. The system could be a disruptor in the industry for high and heavy Lifting." Wilco Stavenuiter said that "our solution might be simple, but what you have to do is a lot." The technical and moral 'you should go for it' support of the stakeholders is essential to move on.

Zbridge: Bring-to-Work system for small vessels

Zbridge has developed a lightweight, fully motion compensated offshore Bring-to-Work system. The access system provides three solutions in one: transferring six team members, transporting 1 ton cargo in a trolley and hoisting up to 3 ton. It's the first offshore access system operating from a small vessel (CTV) providing direct access to the TP platform. According to jury, "ZBridge could open up a new market segment. The Z-Bridge system would contribute to a faster and safer way to bring people from CTV's to the TP platform. Because the frequency of the use of these ships is very high, total safety for working at sea could improve a lot. Commercially Z-Bridge has proven to be successful with user-tests and is fully ready to enter the market with a proven rental or procure and service business model. What the jury appreciates is that this innovation is a good example of adapting proven technology used in an existing market into a new one. Overall, a potentially safer innovation with a very promising outlook." In addition to improving safety, "the system only uses 10 litre diesel per hour", said Bastiaan Spruit, "contributing to commercial and environmental goals as well."

Skylab: Open multipurpose IoT network at sea

Skylab is working on a free and open global Internet-of-Things network for the North Sea. In order to protect the environment and increase safety, energy-efficient long-range wireless sensors are placed on wind turbines. The low-cost sensors can communicate on a battery of solar power for years, over tens of kilometres. "Skylab shows a promising idea how data traffic could be organized in a different way at sea," the jury says. "The Internet-of-Things" infrastructure does not exist at sea yet. The IoT

infrastructure can be used for applications in the offshore wind market, but as well for applications in ship tracking, collision prevention or environmental monitoring. Skylab has shown with their LoRaWAN gateways that the technology is ready to expand to offshore. SkyLab has developed energy-efficient gateways and will provide customers the IoT infrastructure and front-end data visualization solutions. It's a very interesting technology of which it's not the question if, but rather when IoT@sea will be rolled out." To trigger the audience, Remy de Jong stated that "the North Sea could be the first internet of things offshore network of the world."

Raise awareness

The live meeting was hosted by presenter Sophie van Hoytema and TKI Wind op Zee's innovation manager Martin Weissmann. According to Weissmann, the Offshore Wind Innovators Award is intended to raise awareness about the innovative power of the offshore wind industry and the Offshore Wind Innovators community. In addition to the award, the finalists will be offered a one-day workshop to bring their business to the next level. And they will be given the opportunity to bring their innovation to the attention of potential customers and investors during a business event.