

Press release

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Bekaert to provide mooring solution analysis on world's largest offshore floating solar power plant

The Nautical SUNRISE project is set to support the world's largest offshore floating solar power installation. The outcomes of the project will enable the large-scale deployment and commercialization of offshore floating solar systems in the future, both as standalone systems and integrated into offshore wind farms.

Bekaert is proud to announce its participation in this groundbreaking industry project aimed at advancing the mooring technology for offshore floating solar power generation. Building on its pioneering work in floating offshore wind, Bekaert is now leveraging its expertise to contribute to the analysis of the impact of innovative mooring solutions on these offshore floating solar PV systems.

This project aims to design, build, and showcase a 5 MW offshore floating solar system using the modular solution of Dutch floating solar company SolarDuck. RWE will provide the investment for the installation and deployment, and the system is planned to be electrically integrated, certified, and located within RWE's OranjeWind (Hollandse Kust West VII) wind farm off the west coast of The Netherlands.

Prior to the offshore deployment, the Nautical SUNRISE consortium will conduct extensive research and testing to ensure the reliability, survivability, electrical stability, and yield of offshore floating solar systems. A comprehensive scale-up plan will address the challenges and create opportunities to drive forward the commercialisation of offshore floating solar systems.

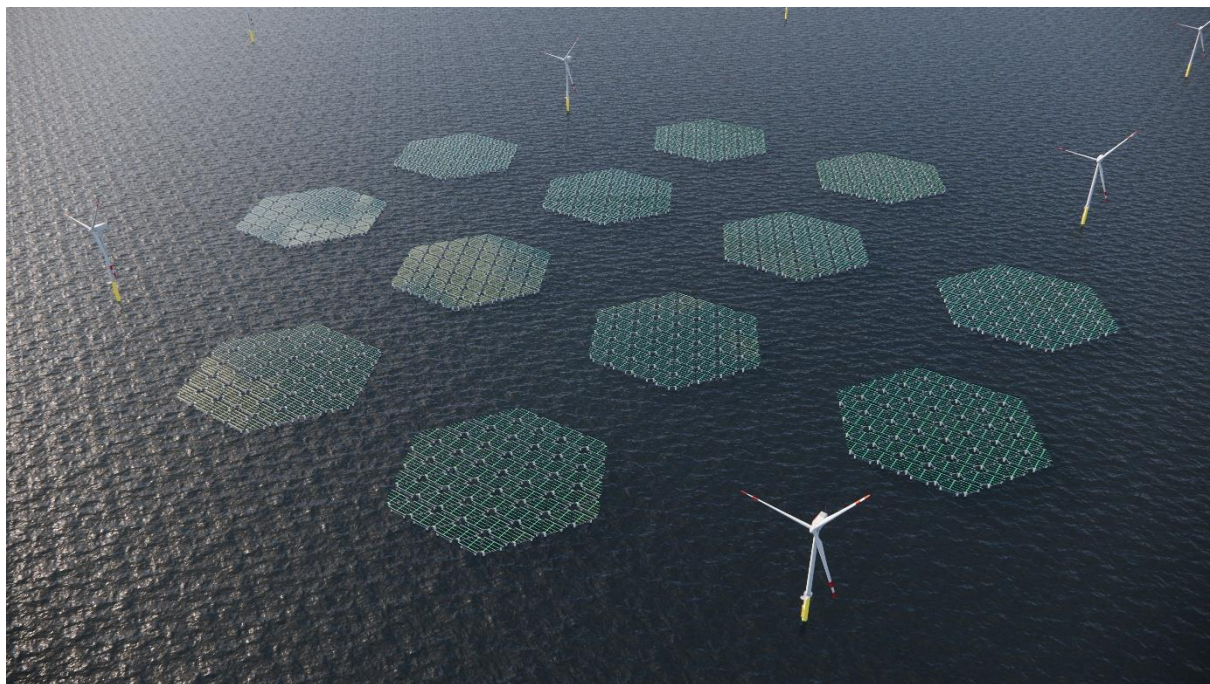
"As part of this collaboration, our team will evaluate the performance and cost-effectiveness of various mooring solutions, including polyester, nylon, and new technologies such as the TFI Marine SeaSpring load reduction device." states Christof Dewijngaert, General Manager Synthetics at Bekaert. "We are committed to exploring the stiffness characteristics of different mooring options under varying conditions, ensuring the optimal design for offshore floating PV."

With sustainability in mind, Nautical SUNRISE is committed to considering the environmental impact and sustainability of offshore floating solar. The project will assess the environmental footprint, circularity, and full life cycle sustainability of offshore floating solar systems. This assessment will not only cover the demonstrator project but also include multiple GW-scale commercial projects, ensuring a comprehensive understanding of the technology's ecological implications.

The Nautical SUNRISE consortium is looking forward to paving the way for a new era in offshore renewable energy, contributing to a more sustainable future for generations to come.

“We are excited to coordinate the Nautical SUNRISE project as one of the flagship initiatives of offshore solar in Europe. Not only do we have the chance to address important knowledge gaps around the design and environmental impact of offshore solar. Together with RWE and the OranjeWind consortium we can do so in full alignment and integration with a commercial offshore wind park.” states Simon Stark, CTO at DMEC.

The project is made possible via a collaboration of its partners: project lead Dutch Marine Energy Centre (DMEC), SolarDuck, RWE, Blunova - a Carlo Maresca Group company, Bekaert, Deltares, Hasselt University (UHasselt), KU Leuven, Oxford PV, SINTEF Industry, SINTEF Ocean, The Catalonia Institute for Energy Research (IREC-CERCA), INESC TEC, and WavEC Offshore Renewables.



Caption: Wind farm incorporating floating solar power plant (credit SolarDuck)



Caption: Close-up of floating solar power plant (credit SolarDuck)

About Bekaert

Bekaert's ambition is to be the leading partner for shaping the way we live and move, and to always do this in a way that is safe, smart, and sustainable. As a global market and technology leader in material science of steel wire transformation and coating technologies, Bekaert also applies its expertise beyond steel to create new solutions with innovative materials and services for markets including new mobility, low-carbon construction, and green energy. Founded in 1880, with its headquarters in Belgium, Bekaert (Euronext Brussels, BEKB) is a global company whose 24 000 employees worldwide together generated € 5.3 billion in combined sales in 2023.

Bekaert sustainability strategy

From making a positive impact with its sustainable solutions and practices, to building a diverse and inclusive future, Bekaert is determined to improve life and create value for all stakeholders. Bekaert delivers on its sustainability strategy by developing and offering sustainable solutions, using materials and energy responsibly, conducting the highest business ethics standards, improving health and safety at the workplace, and engaging employees and business partners throughout the supply chain. By investing in renewable energy, Bekaert contributes to reaching emission reduction targets and accelerating the energy transition that is required to reduce the impacts of climate change.

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