Innovation project to reduce cost of floating solar plants

Large-scale floating photovoltaics plants can be one of the solutions for a sustainable energy supply. The EU has now approved a project that will optimize the anchoring and mooring of floating solar plants and adapt the anchoring to ocean environment as well. The aim is to significantly reduce the cost of mooring floating solar parks.

Seaflex is leading the consortium of Swedish, Spanish and Portuguese partners who have now received funding from the European Union's European Maritime and Fishery Fund (EMFF) to develop the technology for anchoring and mooring floating solar cells. The 24-month project, named *FRESHER - Floating Solar Energy mooring: Innovative mooring solutions for floating solar energy*, starts in November 2019.

Seaflex is leading the FRESHER project to demonstrate and validate new innovative mooring solutions for floating solar arrays which implies an important step in changing *levelized cost of energy* (LCOE) as well as long-term performance and longevity of solar power installations. The project will also address installation techniques, increasing deployment rate and the possibility to deploy offshore applications. FRESHER will show that floating solar energy is ready to take the next steps into large-scale deployments even when projects are challenged by harsh environments.

- Seaflex has worked in the marine industry for a long time, focusing on the environmental aspect of safe and efficient mooring systems. We are world leaders in environmentally friendly, elastic mooring systems for any type of floating application. The aim of this project is to focus on technical improvements specifically for floating solar cell mooring and is therefore very important to us, says Lars Brandt, CEO at Seaflex.

Another partner in the project is EDP, the Portuguese energy company whose energy production to 70 percent comes from renewable sources, and which already has an active floating solar cell park in northern Portugal. They see a great future for floating solar cells.

- Portugal has the ambition to be carbon neutral by 2050 and to have 80% of the energy supplied by renewable sources (RES), a commitment that EDP shared from the first day. Hybridizing alternative sources of energy with our hydro fleet is one of the fastest ways to help accomplish this target. Floating photovoltaic, only in Portugal, has a potential of more than 2 GW. However, the harsh environment in our dams and competition with other conventional RES technologies requires an optimization of the mooring designs and a reduction of costs. Our ambition goes in three ways: improve the existing solutions, bring competitive proposals and contribute for the design in harsher environments, as the offshore sea water applications, says Miguel Patena, Director for Innovation & Technology at EDP Produção.

Other partners in the FRESHER project are RISE, ISIGENERE, EDP CNET, and WaveC.

John Rune Nielsen, Director Research and Innovation at Rise (Sweden):

"We are happy to be part of the value chain in such an innovative and emerging market, providing competences to the industry and supporting SME's."

Emilio Pons Puig, Engineering and Development Director at ISIGENERE (Spain):

"We are very excited to participate in this EU project which will bring new insight and competitiveness in mooring applications to floating solar installations."

João Maciel, Director for EDP CNET (Portugal):

"EDP is a pioneer in renewable energy production with more than 11 GW of wind and solar installed capacity and has also anticipated technology trends in floating offshore wind or smart grids. Floating PV is one of the new technology frontiers to embrace as it explores the synergies between hydro and solar. FRESHER is likely to play a pivotal role in enhancing maturity and competitiveness of such promising technology."

António Sarmento, President of the Board of Directors at Wavec (Portugal):

"WavEC is delightful to join the effort to design and demonstrate at full-scale an innovative mooring solution to take a step forward in improving the performance of floating solar power plants, easing its manufacturability and deployment and eventually LCoE reduction. In addition, it is noteworthy the contribution of the Fresher project to the business development of this emergent sector and in advancing the maturity of its value-chain."

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