

PRESS RELEASE

Launch of the first offshore solar farm in France

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The innovative French company SolarinBlue has deployed the first floating solar units in the Mediterranean sea. This demonstrator will supply electricity to one of the top 10 biggest French ports.

In the Mediterranean sea, photovoltaic technology is ahead of floating wind power. SolarinBlue, designer of a floating photovoltaic solution specially designed for the maritime environment, launched the first units of the Sun'Sète project in the presence of regional Vice-Presidents. The demonstrator is installed in the commercial port, 1.5 km from the coast, on the site of a former offshore oil unloading station. It will be completed in a few months by additional units, for a total installed power of 300 kWp.

France's first photovoltaic port

The Sun'Sète project involves several successive stages, the first of which consists of the installation of two floating units and then the project will grow to 25 units in its final version for a total installed power of 300 kWp and a surface area of half a hectare. The estimated production will then be 400 MWh/year and will be transported by a submarine cable to supply renewable electricity to the infrastructures of the port of Sète. Sète belongs to the top 10 of all French industrial ports.

The project was developed by SolarinBlue in 2021 and obtained all the administrative authorisations in 2022. The environmental aspects of the project have been studied by the French authorities.

Project schedule

- December 2019: creation of SolarinBlue in Paris
- March 2020 : opening of the Indian branch (Mangalore)
- November 2020: tank tests of a full-scale prototype
- 2021: opening of the Montpellier branch
- April 2021: launch of environmental and feasibility studies for the installation of a first prototype in the port of Sète
- March 2022: obtained approval from MoEF&CC (Govt of India) for Mangalore project.
- May 2022: obtaining administrative authorisations for the Sun'Sète project
- September 2022: construction of the Sète prototype begins
- March 2023: launch of the first modules off Sète
- End of 2023: launch of all the floating units, connection of the submarine cable to the consumption site

Over the next two years, SolarinBlue team will study the marine behavior of the floats, the photovoltaic production and will carry out maintenance operations on the demonstrator. These studies will confirm the potential of this proprietary technology and prepare for its large-scale development.

Technical specifications

Sun'Sète project

- Floating units
 - Dimensions: L =12m, W = 9m, H = 3.5m
 - Weight: 8 tonnes
 - Marine galvanized steel structure
 - Recycled HDPE float
 - Photovoltaic capacity of 30kWp per unit
- Test site
 - Distance of 1.5 km from the dyke
 - Water depth of 15m
 - Sandy seabed
- Anchoring
 - Tensioned anchoring in synthetic lines
 - Environmentally friendly helical anchors
 - Redundancy of anchor lines

A sister project in Mangalore, India

In India, SolarinBlue Energy Pvt Ltd has already secured a permit for a 1 MWp solar farm from the Indian government based on its technology.

The site is located near Mangalore, seventh largest port of India and located 10 km away from the shore, at 19m depth for a total surface area of 200m x 200m.

Preliminary studies have been conducted in cooperation with iDeck and assembly of the first units could start before Q1 2024.

The Mangalore project would provide electricity to the MESCOM and help decarbonize electricity generation for more than 1,5GWh per year, the equivalent of the electricity consumption of more than 7,000 households.

A disruptive and patented technology

SolarinBlue's technology brings together completely original innovations. Two patents have been filed and others will be filed shortly. The float is distinguished by four major innovations that make it robust and competitive:

- An economical solution
 - A lightweight, eco-friendly design that is 90% recyclable thanks to a treated steel frame and recyclable High Density Polyethylene (HDPE) floats.
- Robust technology
 - The large air draft and maximum buoyancy of the floating structures protect the panels and maximize their durability. The panels never come into contact with the waves.
 - The floating structure withstands 12-meter high waves and 200 km/h winds
- An ecological and innovative anchorage;
 - SolarinBlue has developed an environmentally friendly helical anchor installation system, which minimizes the impact on the seabed.
 - Thanks to a tensioned anchor, the anchor's footprint on the seabed is less than 1m² per float.
- Modular supports
 - The modules are interconnectable and easy to deploy to form parks.
 - The design of the structures is adapted to each site according to the weather and sea conditions.

Land, highly constrained

Solar energy is the cheapest renewable energy to implement, but its development requires the use of large areas and competition for usage is a limiting factor.

Floating offshore solar power is a very competitive solution for renewable energy production and avoids land use conflicts. While using only a tiny fraction of the maritime land, offshore floating solar allows the deployment of large farms, which reduces the share of connection costs.

Because of its proximity to consumption areas, offshore photovoltaics already responds to the need to decarbonise the energy consumption of coasts and islands.

The first market segments being considered are ports, industrial or yachting facilities and island systems, as stand alone or in colocation with offshore wind farms.

The prospect of a global market

Floating photovoltaic solar energy is set to develop strongly in the coming years. Thanks to the lowest investment cost of marine energies and a zero visual impact from 3 km away from the coast, the potential of eligible sites is in the tens of GW.

The potential for consumption is already there: more than 60% of the world's population, i.e. 3.8 billion people, live within 150 km of a coastline according to the IUCN (International Union for Conservation of Nature).

This technology also finds a natural synergy with the offshore wind farms, whether installed or floating, with which mutualisation of connections will be possible. Photovoltaic and wind power benefit from a favorable overlap, with solar power producing more in summer and in anticyclonic conditions, and wind power in winter.



SolarinBlue is looking at massive co-location development prospects: over 20GW over the next 5 years. Sharing the costs of connection and offshore substations will also further reduce the cost of offshore wind and solar.

About SolarinBlue

SolarinBlue designs a floating photovoltaic solar farm technology, adapted to harsh conditions of open seas, and is developing a portfolio of offshore solar projects in France and internationally.

The company was founded in 2019 by Armand Thiberge, founder of French centaur SendinBlue. The Indian branch was co-founded in 2020 by Kapil Sharma, co-founder SendinBlue. SolarinBlue is the winner of several labels and grants; rewarding its global expertise in marine energy development.

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