



Green energy out of the blue

# Hybrid Solar and Wave Energy Converter

European Funding Project Partners

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# Wave and Solar Hybridisation



Mocean Energy are a Scottish based company developing ocean energy technology. We have some experience in combining wave energy with offshore solar, and we are interested in exploring this further with European partners in a project funded through [CETP](#) funding.

## **Adding solar panels to the deck area of a wave energy converter can:**

1. Improve the year-round average power of the device by reducing summer lull
2. Reduce the levelised cost of energy by offering a cheap source of power
3. Increase the number of economically viable deployment locations

## **Mocean's position for exploring wave-solar hybridisation:**

- We already design floating devices to survive the harshest environments
- We have in house tools which can design systems to resonate at desired frequencies
- We have tested solar at sea with great success
- Solar powered communications and data acquisition.
- Panels have physically survived (so far)



# Proposed CETP 2023 Projects

The [Clean Energy Transition Partnership](#) is multilateral and strategic partnership of national and regional research, development and innovation (RDI) programmes in European Member States and Associated Countries, aiming to boost and accelerate the energy transition and to support the implementation of the European Strategic Energy Technology Plan (SET Plan)

Targeting call module [CM2023-03A/03B](#): Advanced renewable energy technologies for power production in support of [TRL2: Enhanced zero emission Power Technologies](#)



## Mocean Objectives:

- Explore the technical side of the proposed solar/wave device exploring the design space
- Engage with communities and consumers which may utilise such a device for their energy needs.

## Project work may include:

- New WEC/Solar concept designs - e.g. desk-based design work and wave tank testing.
- Feasibility studies and capacity investigations - e.g. Find good locations for wave/solar hybrid. What is a good ratio of capacities?
- Arrays of wave and solar – e.g. protect against wave loading
- Bio-fouling mitigation - e.g. Hydrophobic films
- Small scale Deployments - e.g. Build and deploy solar buoy. Refit Mocean's BlueX and deploy

## Looking for Expertise in:

Renewable Energy Systems Supply/Demand Modelling	Offgrid/Offshore Solar	Structural Design	Electrical Systems Design	Renewable Energy Resource Assessment
Energy Storage Experts	Offshore Niche Demands	Underwater Autonomous Vehicle Operators	Cable/Umbilical Experts	Mooring design Experts
	Universities	Communities	Solar Panel Manufacturers	

Please contact Macauley Versey at [mac.versey@mocean.energy](mailto:mac.versey@mocean.energy) or visit our [CETP Partnership Page](#)