



# Introduction to HelioRec and experience of TAPS

# Team



**Polina Vasilenko**

**CEO**

MEng. Chemical technology

MSc. Renewable Energy

Experience 18 years



**Davide Padeletti**

**CTO**

MEng. Electronics

Wave energy, hydrodynamics

Experience 12 years



**Irena Timofeeva**

**Director of operations**

PhD Finance and Sustainability

M.Litt Finance and Management

Experience 10 years



**Tanmay Tongaonkar**

**Intern**

Pursuing M.E. Engineering &

International Business

(Focus on Renewable Energy)



# Advisors



**Alexey Morozov**  
Business Advisor

MEng. Mechanical Engineering

Cost control; Business and strategic planning

Experience 21 years



**Inna Fusaro (Skvortsova)**  
Financial Advisor

PhD Accounting and Finance

Cost control and cost efficiency; Financial planning and budgeting;

Experience 16 years



**Marco Alves**  
Technical Advisor

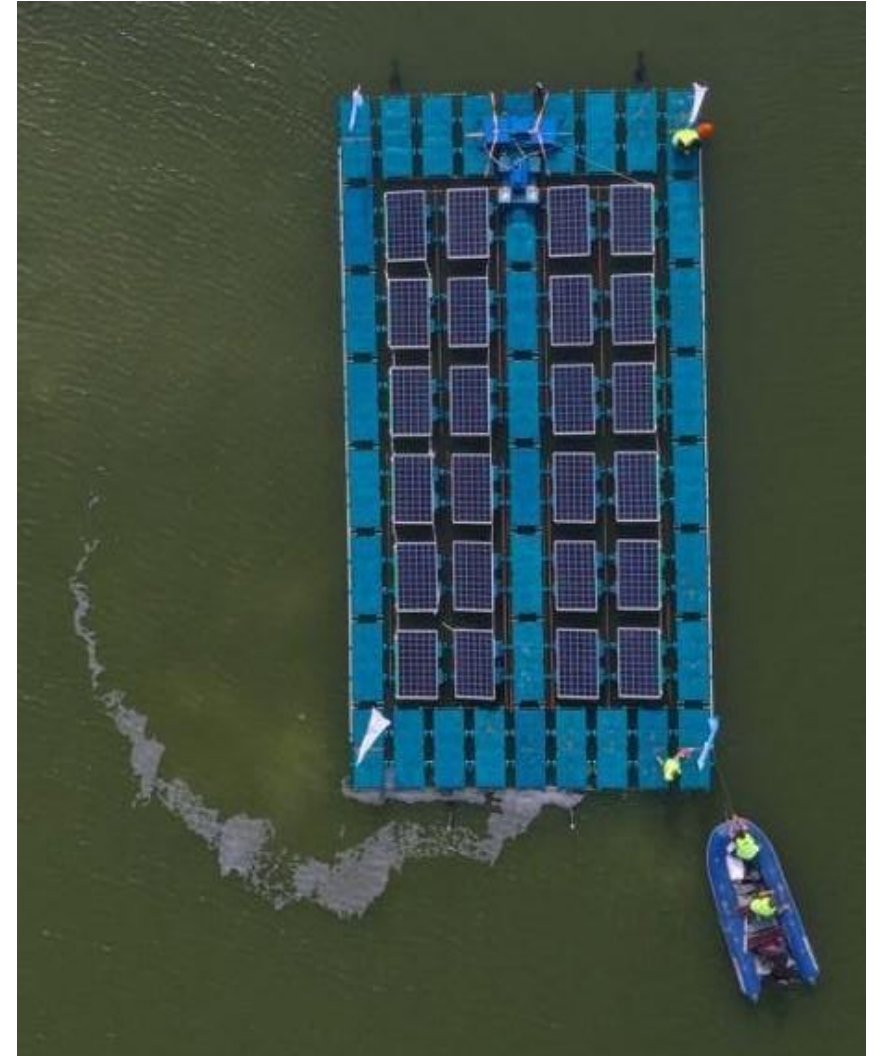
PhD. Mechanical Engineering

Hydrodynamics, interactions of ocean waves with objects

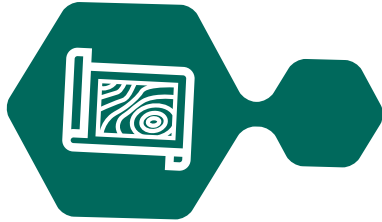
Experience 22 years

# What we are doing

We are building innovative floating systems with a circular economy approach, which help to reduce construction costs of solar power plants, to increase efficiency of solar panels and to unlock new market opportunities



# Problems



Land preparation is difficult and expensive  
(20-35% of CAPEX of power plant)



Low efficiency  
(solar panels are overheating on the ground)



High carbon footprint during manufacturing and  
transportation of the floating system

# Solution



Installation on the water  
(CAPEX is lower on 17%\*)



Higher efficiency  
(on 10-20% due to cooling effect)



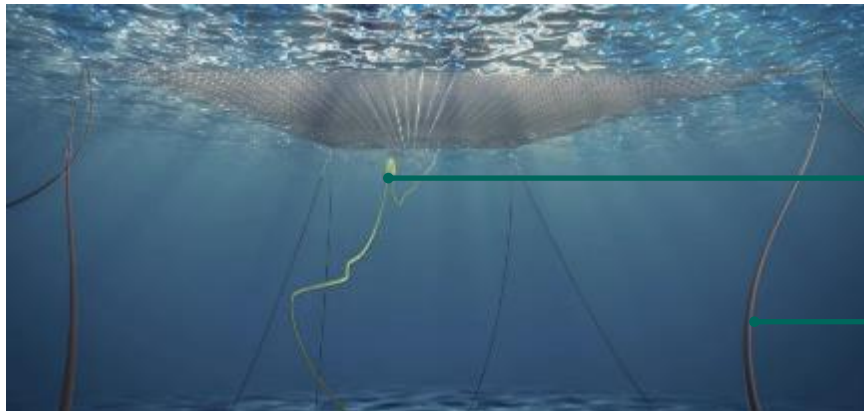
Maximum low carbon footprint with the circular economy approach

# Floating solar power plant



PV Panel

Floating system with  
“hydro-lock” feature



Electrical Cable

Mooring line

# Current Status



- Installed pilot project
- September 2020
- Capacity - 7kW
- Autonomous system with the batteries
- Hybrid – floating PV and aeration system for lake purification
- TRL - 5
- [LINK](#)





# Experience of TAPS



- October 2019 – OPIN TAPS Team carried out review
- Technology at stage 2 – Technical optimization
- TRL 3 – Characterization – Laboratory & Desk

## Inputs

- Scientific, Technical And Engineering robustness, Innovation and Prospects
- Technology Development Pathway
- Next stages in Technology Development Pathway
- Key Elements and Key considerations

# Experience of TAPS



## Lessons learnt

- Contemplate, look at the project from different angles

## Technology Development Pathway was changed

- Need to adapt to the new reality

## Advice to TAPS applicants

- Good service from industry experts
- We recommend



# HelioRec

THE FLOATING SOLAR POWER PLANT

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