

## Pilot Project Proposal

| Nature × Tech Balance |  
| Planet Harmony |  
| Energy Flow |

PO Day | Budapest | 05 March 2026

Dr. Aidana Chalgynbayeva

HUN-REN Centre for Energy Research

**HUN  
REN**



# AVATAR

Agrioltaics for Agricultural Transition and Resilience



# What & Why this project?

## Executive Summary & Vision

- ◆ Pilot goal: Demonstrate AI-supported optimization of crop and energy performance in agrivoltaic systems.
- ◆ Objective: Generate actionable data for future AVATAR deployment.



# PROJECT IDEA

- ◆ Agrivoltaics: dual land use for crops and solar energy.
- ◆ Challenges: variability in crop yield and PV output, need for real-time optimization.
- ◆ AI potential: predictive models, adaptive control, data-driven decision making.



**THE FUTURE OF SUSTAINABLE AGRICULTURE AND ENERGY**

# SCOPE OF THE PROJECT

## Intelligent AVS

### AVATAR PROJECT: CORE STRUCTURE & PILOT OBJECTIVES



# Who We Are Looking For

## ◆ Call for collaboration:

- ◆ Industry partners in agrivoltaics & sustainable farming who can:
  - ◆ Open real operational farms for AVATAR testing.
  - ◆ Integrate AI, smart energy & agri-tech on-site.
  - ◆ Provide data & insights on energy, crops, and efficiency.
  - ◆ Help scale and validate agrivoltaic solutions in real conditions.

## ◆ Tasks for our new partners / expertise:

- ◆ Industry-Oriented Partner: AVS/Agri-tech, EPC Contractor, Solar Developer, Software/AI Developer (SME)



# HUN REN



**Contact:**

**Dr. Aidana Chalgynbayeva**

**HUN-REN Centre for Energy Research**

✉ [aidana.chalgynbayeva@ek.hun-ren.hu](mailto:aidana.chalgynbayeva@ek.hun-ren.hu)

🔗 [ek.hun-ren.hu](http://ek.hun-ren.hu)

From sun to soil - cultivating energy,  
harvesting the future of smart agriculture.