Seamless-PV

FACTSHEET #4

Agrivoltaics application

The project

Seamless-PV drives the implementation of new integrated photovoltaic (IPV) solutions in different market sectors. The objective is to develop advanced manufacturing equipment, processes and digitalisation strategies focusing on glass-glass lamination as well as lightweight composite and polymer-based technologies.

Facing at real industrial environments and different market demands and opportunities, Seamless-PV sets up six pilot line levels and 11 different IPV demo cases across Europe, divided between integration in noise barriers, buildings, electric vehicles, and agriculture.

Agri-PV - Photovoltaics integration in agriculture

The increasing interest of integrated photovoltaic (IPV) solutions has recently started to expand towards different market segments. A curious gaze at our nearest environment allows identifying endless opportunities in which the implementation of IPV solutions could be addressed, bringing synergies, innovation and added value to important market segments such as agriculture (AGRIPV), which is one of the largest greenhouse gas emissions impact sectors in the European Union.

Despite AGRIPV could have the unique ability of combining energy generation and agricultural production and could help the agricultural sector mitigate the negative impacts of climate change and reduce water consumption, there is growing social opposition against the use of agricultural land for large utility PV projects and some resistance from farmers to AGRIPV solutions.

Agrivoltaics concept developed by AKUO.

The SEAMLESS-PV project will demonstrate the low impact of PV deployment on landscapes exploiting its modularity and synergies of use. By facilitating the development of the AGRIPV market through innovative and flexible solutions, the project can help reduce the area required for solar PV development, and help achieve the EU's climate ambitions and decarbonisation targets by 2050.

The project will enable and facilitate large-scale integration of PV in agriculture both in open field and in greenhouses. Two Agri solutions will be developed by SEAMLESS-PV project based on glass-glass and lightweight composite technologies.

1) AKUO and ONYX Solar will develop a customized glass-glass module with specific features, leading to an optimal trade-off between semi-transparency, PV generation and crop growth, exploiting the synergies of the application used for open field demonstration with arable farming.

2) Similarly, a bifacial lightweight composite module will be designed by TECNALIA for integration over multi-span greenhouses with curved roofing.

CONSORTIUM

Seamless-PV-project

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