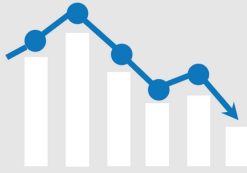
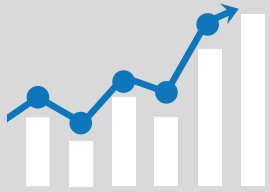


## EXPECTED IMPACT

50% reduction of additional cost of BIPV modules in 2020 and 75% reduction in 2030



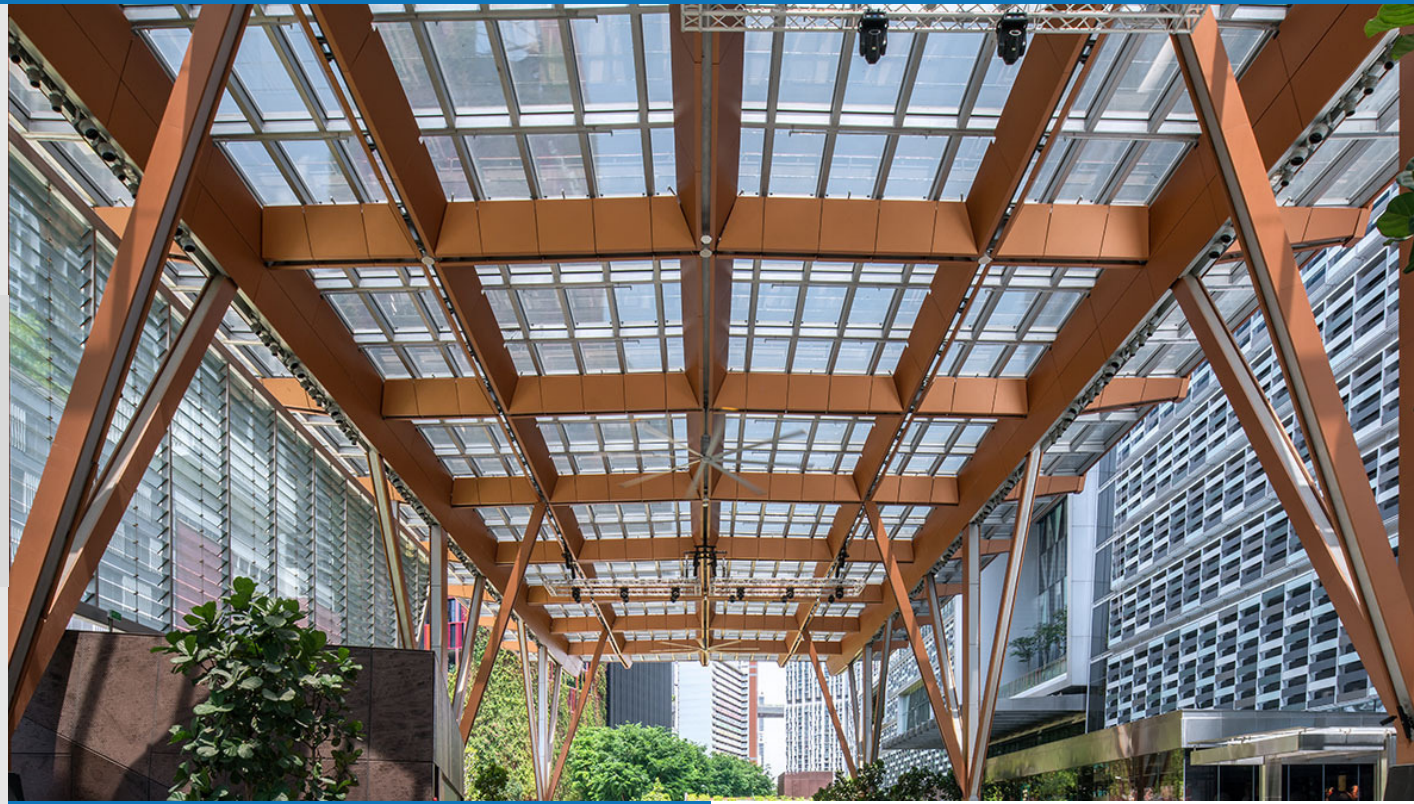
From 15% to 25% in our high scenario, reaching an annual development of up to 3 GWp by 2025 and of 9.3 GWp by 2030



Workforce linked to BIPV could increase from 20% to 44% during the 2020-2030 decade



## DEMO SITES



## CONTACT US

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**#BIPVBOOST**

# BIPV boost

Bringing down costs of multifunctional building- integrated photovoltaic (BIPV) solutions and processes along the value chain, enabling widespread nZEBs implementation



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 817991

## WHAT IS BIPVBOOST?

**BIPV** refers to building elements that, together with their role as building cladding, **produce renewable solar energy thanks to PV integration**

BIPVBOOST aims at **bringing down the cost of** multifunctional building-integrated photovoltaic (**BIPV**) systems, limiting the overcost with respect to traditional, non-PV, construction solutions and non-integrated PV modules.

This will be done **through an effective implementation of short and medium-term cost reduction roadmaps** addressing the whole BIPV value chain and demonstration of the contribution of the technology towards **mass realization of nearly Zero Energy Buildings.**

## SCOPE AND INNOVATIONS

BIPVBOOST will implement short-and medium-term cost reduction roadmaps along the BIPV value chain, at 4 levels:



Flexible and automated BIPV manufacturing line development



Large portfolio of multifunctional BIPV product



Digitalized process and energy management system (EMS) along the value chain



Advanced standardization activities supporting the qualification of BIPV systems for a massive implementation in the building skin



### MANUFACTURE

- Tabber-welding for c-Si,
- Tabber-welding for back-contact cells
- Self-configurable string lay-up equipment
- Semi-manual string interconnection station
- Automatic and self-configurable in-line electroluminescence quality control



### MODULES

- Ventilated façade solution with colored c-Si based cell
- Skylight glass, ventilated facades and curtain wall with a-Si patterning solutions
- Bifacial modules for balustrades, walkable floors and curtain walls with back-contact cells



### DIGITAL PROCESS & EMS

- BIM-based tool supporting process design, manufacturing and installation
- Cloud-based BEMS including demand response and storage management
- Fault detection and diagnosis tool
- Augmented reality app for pre-design stage



### BUILDING SKIN SOLUTIONS

- Multifunctional BIPV opaque façade cladding solution
- Enhanced frameless façade systems with CIGS on metal modules
- Enhanced roof and façade systems with CIGS on metal modules
- Glass-glass plug&play façade systems

## PHASES

1

Roadmaps for cost reduction development & nZEBs energy targets and environmental assessment

DEFINITION

2

- Manufacturing process
  - BIPV Modules
  - Building skin solutions
  - Digitalized process along the value chain
- Performance - based assessment

IMPLEMENTATION

3

- Experimental buildings and test facilities (TRL 6)
- Real buildings (TRL 7)

DEMONSTRATION

# OUR GOAL

## PARTNERS

