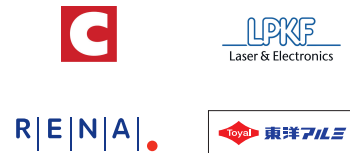


Project Partners

The IBC4EU consortium consists of 21 participants -17 partners and 4 associate partners-. The consortium brings together European and non-European companies and experts to address multiple challenges for the development of cost effective and sustainable bifacial interdigitated back contact (IBC) solar cells and modules.



Associated Partners



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No.101084259

IBC4 EU

Bringing back solar cell production to Europe

for a vertically integrated European GW-scale PV production value chain



Interdigitated Back Contact Cell (IBC)

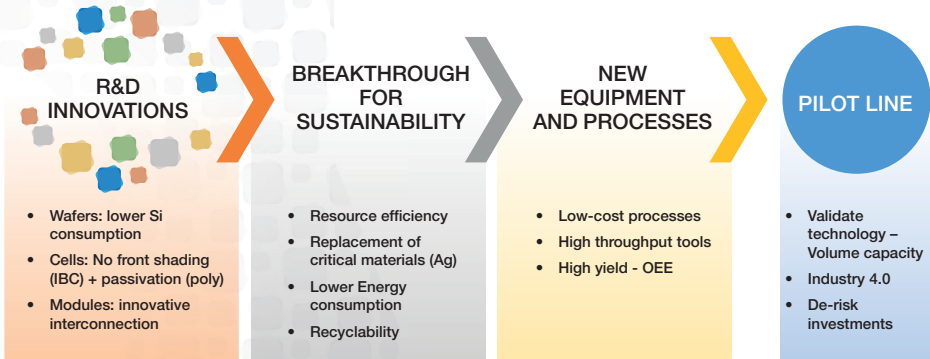
Why IBC4EU?

"We need to bring manufacturing back to Europe and the Commission is willing to do whatever it takes to make it happen."

- Kadri Simson, Commissioner for Energy

Today the vast majority of the components in the value chain for PV modules are manufactured outside of Europe. Innovative concepts are needed to bring the manufacturing industry back competitively. Within the IBC4EU project, we aim to overcome the barriers to market entry for low-cost, high-efficiency bifacial interdigitated back contact cells (IBC) produced in the EU. Our work will enable highly advanced and cost competitive IBC products to be manufactured in Europe.

IBC4EU approach



Higher efficiency solar cell designs, such as IBC cells, are required in the future that increase conversion competence and reduce the cost of solar electricity generation.

- Interdigitated back contact (IBC) solar cell architectures are characterized by an interdigitated p / n pattern and by the respective electrical contacts being located on the rear side of the device. Accordingly, no frontside metallization is required, allowing for highest energy conversion efficiencies.
- Placing the metallization pattern on the rear side eases the necessity for high quality fine line metallization allowing for easy integration of alternative metallization structures, so that the consumption of silver can be drastically reduced.
- The key feature of the IBC4EU solar cell is that it can be processed on any wafer size using standard solar cell production equipment, such as tube diffusion furnaces and screen-printing metallization.
- This technology offers several advantages and allows efficiencies of 25% and above, claiming several world records. The IBC4EU project will develop next-generation bifacial IBC solar cell and module technologies applying passivating poly-Si contacts for mass production of high-efficiency (25%) and cost-competitive, eco-designed PV modules across the whole value chain of ingot, wafer, cells and modules in Europe.

Schematic cells structure

