Low-cost and simplified back-contact module concept

Publieke samenvatting / Public summary

Aanleiding
Foil-based back-contact module technology has been developed and refined over a number of years by ECN. It is an integrated cell and module design that makes the most of the performance advantage of back-contact cells by minimizing the cell to module losses. A breakthrough is needed to ensure that it is cost competitive when compared to conventional and competitor technologies.

Doelstelling
The goal of the Los Bacos project is to significantly reduce the cost of back-contact module technology based on a conductive back-sheet foil as developed by ECN. By doing this, the cost of the module can be reduced to a level below a conventional module, but with the additional power output that can be achieved by the incorporation of back-contact cells.

Korte omschrijving
The breakthrough will be achieved in the Los Bacos project by the development and implementation of two new approaches to module manufacture. The first will be the use of aluminium as the conductor in the module, more specifically the use of a novel cold-spray process to locally apply a copper coating to the aluminium to ensure a low and durable contact resistance. The second is the development of materials and processes for a powder-coated encapsulant. This will allow the encapsulant layer between the cells and the conductive back-sheet foil to be reduced which will significantly reduce the amount of conductive adhesive needed to bridge

Projectinformatie / Project information

Projectnummer / Project number
TEZ0214014
Subsidiebedrag / Grant amount
€ 745.524,00

Algemene informatie / General information

Penvoerder / Secretariat
DSM Advanced Surfaces B.V.

Publicaties en materialen / Publications and attachments

- **28.01.2019**

  Eindrapport Los Bacos 2017 (TEZ0214014)

Volg Topsector Energie op X / Follow Topsector Energie on X

@TSEnergie

the gap between the cells and the conductive back-sheet. Together, these technologies are expected to result in a module cost reduction of up to 5% which is predicted to take the cost of the module below that of a conventional module.

Resultaat

The result of the project will be a cost competitive module technology suitable for all types of back-contact cell including the next generation of cells (IBC and IBC-HIT), so making the most efficient use of the high power-output that these devices will generate. The high cost reduction will open up the market for further industrialisation of the module technology, as the cost saving will offset any need for investment in new apparatus by the module manufactures. The project will also promote Dutch industry as a major player in development of materials and processes for back-contact module technology.

De data in deze applicatie is afkomstig van de Rijksdienst voor Ondernemend Nederland (RVO) en wordt in samenwerking met de Topsector Energie ontsloten.
Voor meer informatie over de Topsector Energie, ga naar **www.topsectorenergie.nl**.

Voor meer informatie over de TSE / Energie-Innovatie regelingen die RVO aanbiedt, ga naar **www.rvo.nl/tse**.