

AER-2

Publieke samenvatting / Public summary

Aanleiding

The future of the European photovoltaic industry depends heavily on breakthroughs in 'mass customization' of photovoltaic roofs, that require the European local execution of engineering, on-demand manufacturing and on-site delivery, and that need a high level of aesthetics to appeal to a broad public.

Doelstelling

The overall objective of the AER II project is to develop, industrialize and bring to the market a revolutionary new concept for a residential roof integrated PV system. The pursued BIPV roof concept has the unique selling points of superior aesthetics; full roof coverage; highly flexible functionality for the end user (optional choices such as windows, thermal panels, passive homogeneous panels, high efficiency PV, full-black and coloured modules); low bill of materials by using thin glass, frameless panel design, Jbox-less interconnection and a simplified mounting method without screws, clamps, gutters and covering plates; Fast and project-specific product delivery by developing a streamlined and local-for-local (European) supply chain; High power density by maximizing the packing density of the modules on the roof. At the same time, fundamental know-how on BIPV system performance will be obtained by a focus on outdoor field test experiments.

Korte omschrijving

The Aesthetic Energy Roof (AER) concept is based on a patent pending frameless, junction-box-less, glass-glass laminate with integrated mounting

Projectinformatie / Project information

Projectnummer / Project number

TKITOE1409301

Subsidiebedrag / Grant amount

€ 59.653,00

Algemene informatie / General information

Publicaties en materialen / Publications and attachments

- 10.12.2018

**Eindrapport AER-2 2016
(TKITOE1409301)**

**Volg Topsector Energie op X / Follow
Topsector Energie on X**

@TSEnergie

functionality. The building integrated energy roof concept has a unique set of properties like full roof filling, unsurpassed high-end aesthetic appearance, minimized bill-of-materials, optionally included integrated window and integrated solar thermal panel. The objective of the project is to further develop the AER concept into more product lines and bring these products to the market. First, a market study will deliver an overview of the various BIPV market segments and the best fit for the various AER product lines. Next, we will optimize and industrialize the base product and its manufacturing processes and research and develop the envisaged range of product lines within the AER platform. Finally, a demo roof will be built up based on the applicable building codes and regulations. The demo roof will be followed in a 4 seasons performance measurement setup.

Resultaat

The AER II project will impact the KPIs of the PV Implementation Plan in the following way: • Multifunctional products (watertight roof functionality whilst simultaneously producing electricity); • Reduction of the price of a system for BIPV applications; • Increase PV competitiveness; • Demonstration of high-quality, versatile integration of PV in buildings and infrastructural objects.

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.