

SCalable, Aesthetic, Robust, Light weight bipv ElemenTs

Publieke samenvatting / Public summary

Aanleiding

The integration of PV into buildings – BIPV- is currently still a small percentage of the total PV market, about 2%. The reason that this market is still relatively small has to do with costs, lack of scalable PV products and lack of awareness in the building sector. Steel products form an important market share for facades and roofs of buildings, and are easy to scale. Combining this with scalable PV could result in a breakthrough in BIPV.

Doelstelling

The aim of the project is to prove the feasibility of a BIPV product on steel basis, which can benefit from economies of scale, aesthetics, is scalable and has inherent low manufacturing costs. This contributes to the main aim of the iDEEGO Multifunctionele Bouwdelen target: To combine renewable energy generation (PV) with a complete steel building element which also provides heat and sound insulation, as well as full building weather protection.

Korte omschrijving

Activities The feasibility will be based on the following aspects: 1 Manufacturability: is the process compatible. ECN and TSE will conduct material and process experiments, and consult with equipment manufacturers. 2 Aesthetics: does it result in an attractive product which is accepted by architects and project developers. TSE and ECN will make a design, and gather input from relevant market parties at the start. 3 Power output and cost:

Projectinformatie / Project information

Projectnummer / Project number
TEID115008

Subsidiebedrag / Grant amount
€ 157.873,00

Algemene informatie / General information

Penvoerder / Secretariat
Stichting Energieonderzoek Centrum
Nederland

Publicaties en materialen / Publications and attachments

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how much power is generated per m² and what is the expected pay back time. This will be measured and calculated by ECN, with input from TSE 4 Reliability of the product: ECN will conduct climate chamber and stress tests. 5 Market acceptance: do parties from the building industry accept the product, how can the product be adjusted in order to generate acceptance (e.g. aesthetics, ease of installation, costs,...). TSE and ECN will manufacture a demonstrator, and discuss results of experiments, costs calculations and electricity generation with relevant market parties.

Resultaat

The specific results of this project will be: 1 A report describing the design of the complete product , this will include an initial calculation of production cost; 2 Report describing reliability test results of the PV-steel product; 3 Electricity annual yield calculation and detailed cost calculation; 4 Report describing market acceptance criteria; 5 Report describing further steps required to go to full scale production; 6 Full size demonstrator (up to 1x2 m), incl outdoor performance measurement data for this demonstrator.

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.