Multi Line Concentration modules using Advanced cell edge passivation solutions

Publieke samenvatting / Public summary

Aanleiding

Solar modules have become commodity components in just one decade of time. Wholesale prices vary from 0.5 €/Wp for low-cost commodity type modules up to 1.3 €/Wp for premium quality. In high-efficiency modules, the solar cells dominate the production costs of a solar module. Concentration of sunlight is an elegant way of reducing the cost of high-efficiency solar cells. Large cells will be cut up into smaller pieces while optics is applied to guide the sunlight towards the solar cell.

Doelstelling

It is the objective of the MILICIA project to develop a low-concentration PV technology that can compete with conventional power generation without subsidies or feed-in tariffs. LineSolar has the ambition to produce their Multi-Line Concentration (MLC) technology at 0.33 €/Wp manufacturing costs including solar cells. As a bonus, the technology is environmentally friendly because silicon consumption is reduced with a factor 10 and silver with a factor of at least 5.

Korte omschrijving

The MILICIA project consists of a technology co-development between LineSolar and ECN. ECN will develop application specific IBC solar cells for low concentration applications and prove its manufacturability. LineSolar will develop the module manufacturing processes.

Resultaat

Projectinformatie / Project information

Projectnummer / Project number
TEID115003
Subsidiebedrag / Grant amount
€ 186.695,00

Algemene informatie / General information

Penvoerder / Secretariat
Linesolar BV

Publicaties en materialen / Publications and attachments

- **28.01.2019**

  Eindrapport MILICIA 2017 (TEID115003)

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The MILICIA project will result in an IBC solar cell with 22% conversion efficiency at 20x concentration. Commercialisation of MLC technology is key. Therefore, a simple device architecture will be selected according to a validated cell production process. To prove the viability of the MLC technology, several prototype MLC modules will be built and tested within the project. Finally, the design of solar power plants using MLC modules will be delivered to generate electricity at 10-15% lower cost level when compared with competing technologies, bringing the cost of solar PV below the cost of coal fired power plants which is the cheapest form of power generation today.

De data in deze applicatie is afkomstig van de Rijksdienst voor Ondernemend Nederland (RVO) en wordt in samenwerking met de Topsector Energie ontsloten.
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