RHINO (ERANET)

Publieke samenvatting / Public summary

Aanleiding

Key elements of the cell structure are a selective boron-doped emitter and a full area passivated rear contact. For these key elements, production capable processes and high throughput production tools will be developed and implemented in a lean solar cell production process. Reducing the front carrier recombination losses by the selective emitter structure will increase the efficiency of the developed industrial solar cell from currently ~21% to values approaching 23% with open circuit voltages close to 700 mV while using screen printed metallization and established production equipment.

Doelstelling

This project targets the development of an industrially feasible manufacturing approach for an n-type cell structure that has demonstrated above 25% efficiency in a cleanroom environment.

Korte omschrijving

Test modules fabricated from these bifacial cells will demonstrate high bifaciality factors of 90%, outperforming current PERC modules in terms of efficiency and bifacial properties. Modeling of bifacial module operation will enable a reliable prediction of energy yields depending on system configuration and ambient conditions. This will also increase the energy harvest and thus will help to further reduce the levelized costs of PV electricity and system turn-key costs (by reduced BOS) in Europe.

Projectinformatie / Project information

Projectnummer / Project number
TESOL17007
Subsidiebedrag / Grant amount
€ 313.478,00

Algemene informatie / General information

Penvoerder / Secretariat
Tempress Systems B.V.

Publicaties en materialen / Publications and attachments

- **23.02.2022**

  Eindrapport TESOL17007

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