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# Solarus Sunpower BV



## Business Overview

**ESTABLISHED:** 2006

**LOCATION:** Venlo, Netherlands

**LISTING:** Unlisted

**TYPE OF COMPANY:** For profit

**NUMBER OF EMPLOYEES:** 11-50

### BUSINESS AREA:

Renewable Energy; Manufacturing and Distribution of Hybrid Solar Collectors

### COMPANY WEBSITE:

[www.solarus.com](http://www.solarus.com)

### BUSINESS OVERVIEW

Solarus Sunpower BV (Solarus) is a renewable energy company, headquartered in Venlo, the Netherlands, with a Research & Development centre in Gävle, Sweden and a sales office in Cape Town, South Africa. Its core activities are the development and marketing of hybrid concentrated solar photovoltaic and solar thermal panels that supply clean and low cost heat and electrical energy for residential and industrial customers. The company's customers range from residential homeowners through to large industrial companies, with the main markets for operations currently in Sweden, The Netherlands and South Africa with a view to expand out into South East Asia, India, and Southern Europe.

Solarus has developed PowerCollector, an integrated solar heat and electricity generation system that delivers clean and low cost energy for households and industries where it can be used for cooling and heating, steam generating or desalination installations. By concentrating the sun radiation and recovering 'waste heat' the collector creates a combined efficiency that is four times higher than conventional solar panels. The technology is a hybrid technology, known as Concentrated Photovoltaic Thermal, or C-PVT.

### SOCIAL MISSION

Greenhouse gas (CO<sub>2</sub>e) emissions from energy generation and heating represent a major driver of global climate change. Currently, 47% of total energy consumption is directed to heating and cooling demands and of this energy 70% is currently generated using greenhouse emitting fossil fuel technologies.

Solarus aims to improve the quality of life for communities across the globe by directly addressing energy poverty. This is a key focus of the UN energy group and an issue highlighted by the International Energy Agency. Solarus's objectives in delivering social impact are:

Reducing energy poverty by providing access to low cost and environmentally sustainable electric and thermal energy.

Addressing climate change by reducing global dependency on fossil fuels based energy technologies and increasing the use of low carbon C-PVT technology.

Reducing exposure to local air pollution in developing countries by displacing common water heating practices that rely on the burning of coal and biomass.

Creating local employment opportunities in developing countries in sales, distribution and installation.

### WHO BENEFITS?

**ENVIRONMENT:** Reduction of CO<sub>2</sub> in the atmosphere by replacing fossil fuel generation with renewable energy. The company targets a 97-99% net reduction in greenhouse gas emissions through deployment of its technology.

**HOUSEHOLDS:** Solarus' products a simple, small-scale, cost-effective hybrid renewable energy solution generating an estimated 50% of the electricity and heat needs of a typical household.

### RURAL AND ISOLATED

**COMMUNITIES:** In South Africa, the Department of Energy has set a target of installing 1.3 million high-pressure solar hot water units and is offering rebates to achieve this. Solarus is setting up manufacturing facilities in South Africa in order to address this opportunity.

**PUBLIC HEALTH:** Solarus projects that the reduction in air pollutants due to deployment of its technology (and replacement of burning fossil fuels or biomass) will be 93-99%.

### UNDERPRIVILEGED AND

**UNEMPLOYED:** Although there is potential for significant job creation, there is a shortage of available skills. Solarus will look to address this by providing training as assembly line workers or installation technicians.

## Commercial and Financial Summary

### PREVIOUS FINANCING

Up to 2016 Solarus has received investment totalling over €8 million over the last 9 years from investors including banks, industrial corporations, investment funds and private investors. In 2016 another €6 million of funds was raised and committed (including a successful crowdfunding round).

### FINANCIAL INFORMATION

Not disclosed by the company.

### PLANNED FINANCING

Solarus is currently in a financing round of €6 million. €4 million has already been committed by two professional early stage investors and another €440,000 was invested by senior management and existing shareholders. A crowdfunding round of at least €250,000 is also planned.

The proposed use of funds is as follows:

Completion of the automated production line to bring production time further down

Preparation for a second production line in 2017

Participation in setting up 3 local assembly plants

Marketing funds to achieve sales of 20.000 PowerCollectors in 2017

Working capital to further scale up production

Future investment discussions are also underway, including preparation for an IPO in 2018/19.

### BUSINESS HIGHLIGHTS

The company is entering a rapid expansion phase and is projecting a turnover of nearly €131m by 2019.

Solarus has patented a novel proprietary concentrating photovoltaic / thermal system (C-PVT) that generates electricity and heat at a price per installed Wp 50% less than normal solar PV.

The innovative 'in roof' version of PowerCollector™ that can serve as a complete roof will be introduced and installed in Q1 2017.

The company has entered strategic partnerships with leading manufacturing firms and other service providers which provide distribution channels and offering complete bundled energy solutions.

In 2016 Solarus obtained Eureka-Eurostars 3 year grant of €2.68m committed to consortium that focuses on technology development of Solarus high volume production line and PowerCollector™.

Large scale factory IS operational with a production capacity of 500 units per week.

600 units have been installed in 35 projects all over the world.

The company is at MOU stage with partners in South Africa, Turkey and Central America for 3 assembly factories with total value of €5.4m.

Solarus has achieved substantial cost price savings per collector down via two integrated work streams and optimisation of production process.

## Impact Assessment Matrix

### ECONOMIC IMPACT

	MEASUREMENT	REPORTED OUTCOME
<b>Fuel Poverty</b>	% reduction in energy cost per kWh	20%
	% reduction in gas price	8.5%
<b>Employment</b>	No. of new full time equivalent positions created	To be reported

### SOCIAL IMPACT

	MEASUREMENT	REPORTED OUTCOME
<b>Public Health</b>	No. of new full time equivalent positions created	0.39 tonnes / year
	Total amount of CO <sub>2</sub> saved per year	209.27 tonnes / year

### ENVIRONMENTAL IMPACT

	MEASUREMENT	REPORTED OUTCOME
<b>Emissions</b>	Net emissions avoided (tonnes CO <sub>2</sub> e) p.a per PowerCollector installed	0.45 kg / collector-year
	Total net emissions avoided (NOx) p.a across all installations	244.08 kg / year
	Total CO <sub>2</sub> saved	209,27 Tonnes / year
<b>Renewable Energy</b>	Electrical Wp installed	134,75 kWp,el
	Thermal Wp installed	673,75 kWp,th

### GOVERNANCE

	MEASUREMENT	REPORTED OUTCOME
<b>Corporate Governance</b>	No. of Non-Executive Directors on Board	2 out of 5
<b>Diversity</b>	No. of female board members	1 out of 5

## MUST READ

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