





Solarus Renewables develops three novel solar collectors within international research projects.

- A retrofit collector to be mounted on the back of PV solar panels
- A concentration PVT collector with a novel geometry

A concentrating photocatalytic collector for purification of industrial waste water and generation of heat/electricity/hydrogen







Solarus Renewables use and combine a lot of novel technology in new ways, like spectral splitting, novel flow geometries, testing nanofluids, novel technology to utilize 99% of the solar spectrum, novel cooling technology....

....and does so in an ecofriendly way

The novel technologies that leads to high efficiency, improved sustainability and good profitability





PV-panels can utilize 23%* of the energy in the solar radiation in combination with our retrofit collector this increases to 90%* for our concentrating PVT collector it will also be 90%, while the concentrating photovoltaic collector will utilize 99%* of the solar radiation yielding a lot more energy than PV-panels only.

*The figures are approximations since solar radiation and spectrum is variable.





By cooling the PV-cells electric efficiency increases with 10-20% depending on temperature and type of PV-cells. All our collectors will have a cooling effect but particularly our retrofit collector that operates at lower temperatures. Cooling also increases the lifespan of the PV-cells, which is needed not least in warm climates.

By harvesting the heat the energy yield is about three times higher and the heat is utilized instead of being vented out into the atmosphere which is bad for the climate.

Hence our collectors are makes solar energy more sustainable and is better for the climate and the world economy.





Tests of early prototypes of the retrofit collector and concentrating PVT collector have been made at University of Gävle in Sweden and at Denmark Technical University. Further tests will be done at Laboratorio Nacional de Energia e Geologia on Portugal.

Together with SolarPeak we have set up more advanced prototype manufacturing in Robertsfors in Sweden.



Team



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Research partners





Commercial partners

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Applications and customer sectors

Retrofit Collector	Concentrating PVT Collector	Concentrating Photovoltaic Collector
Energy storage in ground source heat systems	Food industry	Purification of industrial wastewater
Heating of buildings with or without heat pumps	Other industry	Hydrogen production
Heating of swimming pools	District heating	
Primary preheating of water for hydrogen production	Car and truck washing	
District heating with heat pumps	Secondary preheating of water for hydrogen production	
	Public bath houses	
	Saunas	
	Domestic hot water	
	Hotels]



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