

SunOyster cooling (SOcool)

Fact Sheet

Project Information

SOcool

Grant agreement ID: 778106

[Project website](#) 

DOI

[10.3030/778106](https://doi.org/10.3030/778106) 

Project closed

EC signature date

1 August 2017

Start date

1 September 2017

End date

31 October 2021

Funded under

SOCIETAL CHALLENGES - Secure, clean and efficient energy

Total cost

€ 1 997 825,00

EU contribution

€ 1 398 477,50

Coordinated by

SUNOYSTER SYSTEMS GMBH



Germany

Objective

„SunOyster cooling – SOcool“ has the starting point that cooling and refrigeration cause 7% of the worldwide greenhouse gas emissions. With alone 100 million air conditioners sold every year, they will cause 13% in 2030. As cooling is mainly required when the sun is shining, it is our aim to use solar energy to generate cold. We plan to develop three solar cooling packages consisting of the SunOyster – a disruptive concentrating solar technology for the co-generation of electricity and heat with a total efficiency of 75% – and of selected thermal chillers to create standardized packages for the supply of electricity, cold and heat. We are focusing on three applications which have shown in a SME Phase 1 project their attractiveness:

- SOcool P3 Hotel for hotels, hospitals and large apartment houses;
- SOcool P2 Office for offices and other commercial buildings and
- SOcool P1 Pool for family houses with pool.

SunOyster has reached TRL 7, is protected by IP rights and has the advantages of secure storm position, lower costs of energy, higher output temperatures and bigger energy generation in relation to the roof surface. For the first time, a CPV system supplies heat for thermal cooling.

In the 66 bn € market for air-conditioning equipment, users will be located mainly in Southern Europe and in the sun belt of the world who will enjoy more comfort and better work performance through the cooling of commercial and residential buildings. Compared to grid-powered chillers, the three packages promise a profitability of up to 40% and a payback of 1.5 years.

SunOyster Systems will build up a pilot production, test and certify the SOcool packages, execute demonstration projects, strengthen the industrial value chain and start commercializing SOcool. Until 2024, the annual installation of SOcool products shall rise to 50 MW electric plus 75 MW thermal capacity p.a. corresponding to 10,000 SunOysters per year, generating 66 million € turnover and creating 140 green jobs in EU.

Fields of science (EuroSciVoc)

[engineering and technology](#) > [environmental engineering](#) > [energy and fuels](#) > [renewable energy](#) > **[solar energy](#)**

[engineering and technology](#) > [mechanical engineering](#) > [thermodynamic engineering](#) > **[heat engineering](#)**

[engineering and technology](#) > [electrical engineering, electronic engineering, information engineering](#) > [electrical engineering](#) > [power engineering](#) > [electric power generation](#) > **[combined heat and power](#)**

[engineering and technology](#) > [materials engineering](#) > **[coating and films](#)**

[social sciences](#) > [sociology](#) > [governance](#) > **[taxation](#)**



Programme(s)

[H2020-EU.3.3. - SOCIETAL CHALLENGES - Secure, clean and efficient energy](#)

MAIN PROGRAMME

[H2020-EU.2.1.1. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies \(ICT\)](#)

Topic(s)

[SMEInst-09-2016-2017 - Stimulating the innovation potential of SMEs for a low carbon and efficient energy system](#)

Call for proposal

[H2020-SMEInst-2016-2017](#)

[See other projects for this call](#)

Sub call

H2020-SMEINST-2-2016-2017

Funding Scheme

[SME-2 - SME instrument phase 2](#)

Coordinator



SUNOYSTER SYSTEMS GMBH

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Address

**POSTSTRASSE 46
25469 HALSTENBEK**

 **Germany** 

SME 

Yes

Region

Schleswig-Holstein > Schleswig-Holstein > Pinneberg

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&L programmes](#) 

[HORIZON collaboration network](#) 

Last update: 5 April 2023

Permalink: <https://cordis.europa.eu/project/id/778106>

European Union, 2025