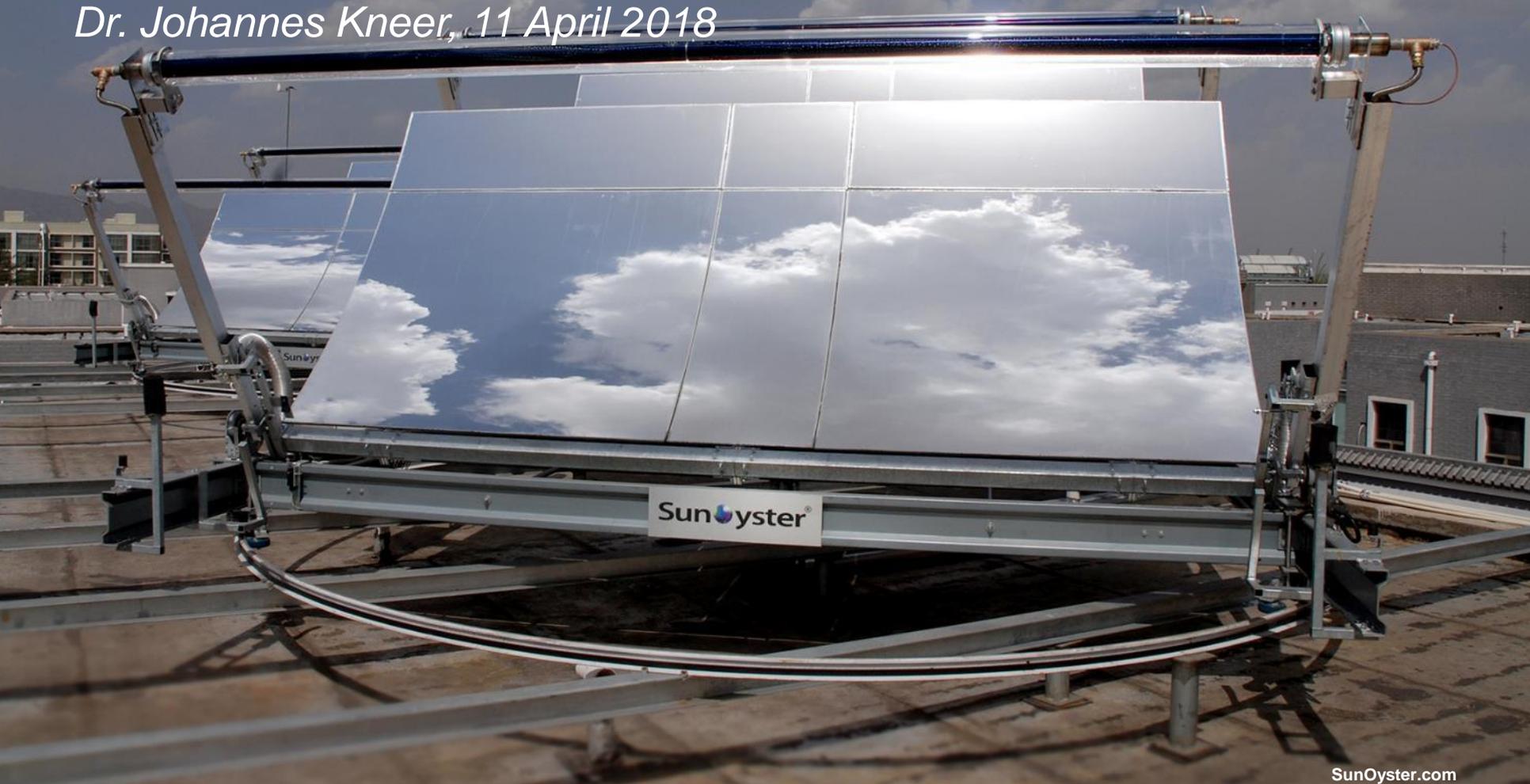


SunOyster Systems GmbH, Halstenbek

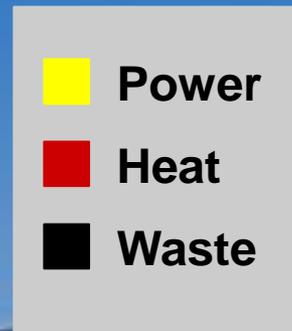
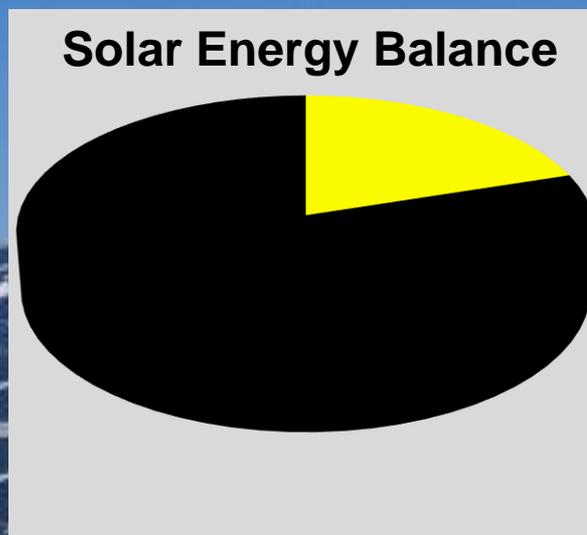
SunOyster

– Double the Power

Dr. Johannes Kneer, 11 April 2018



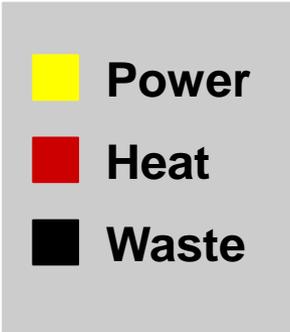
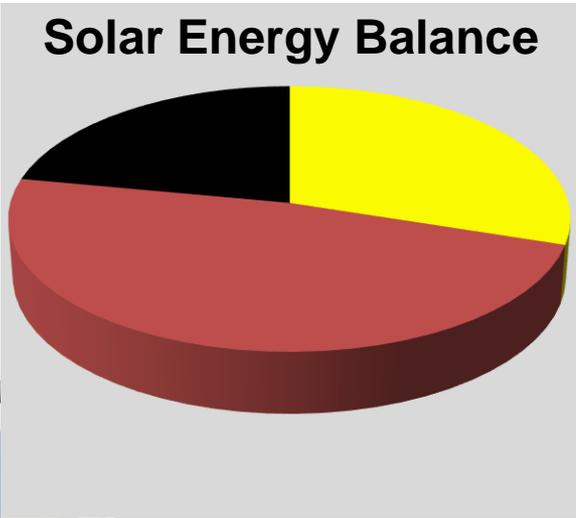
The problem: Photovoltaics (PV) wastes approx. 80% of the solar radiation



Generated PV electricity covers normally only a part of the total energy demand



The solution: Double the Power! SunOyster converts up to 75% of the solar radiation into heat + power



The SunOyster covers the complete energy demand of power, heat and cold



Charge the E-Car

Heat the House in Winter

Heat the Pool

Cool the House in Summer

Power the House

SunOyster combines the best of solar thermal power plants (CSP), CPV and PV



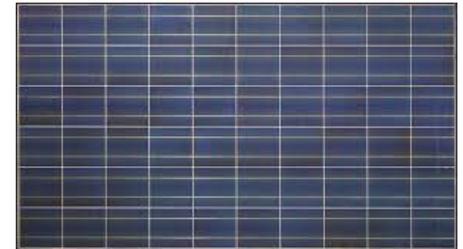
CSP

Cheap mirrors
Glass tubes for receiver



CPV

Bi-axial tracking
Concentrator cells



PV

Modular
Roof Installation
Cost-efficient



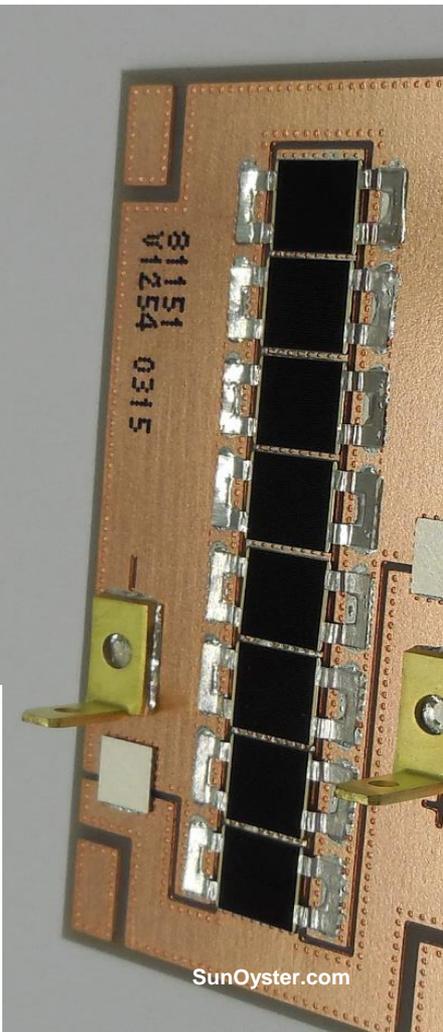
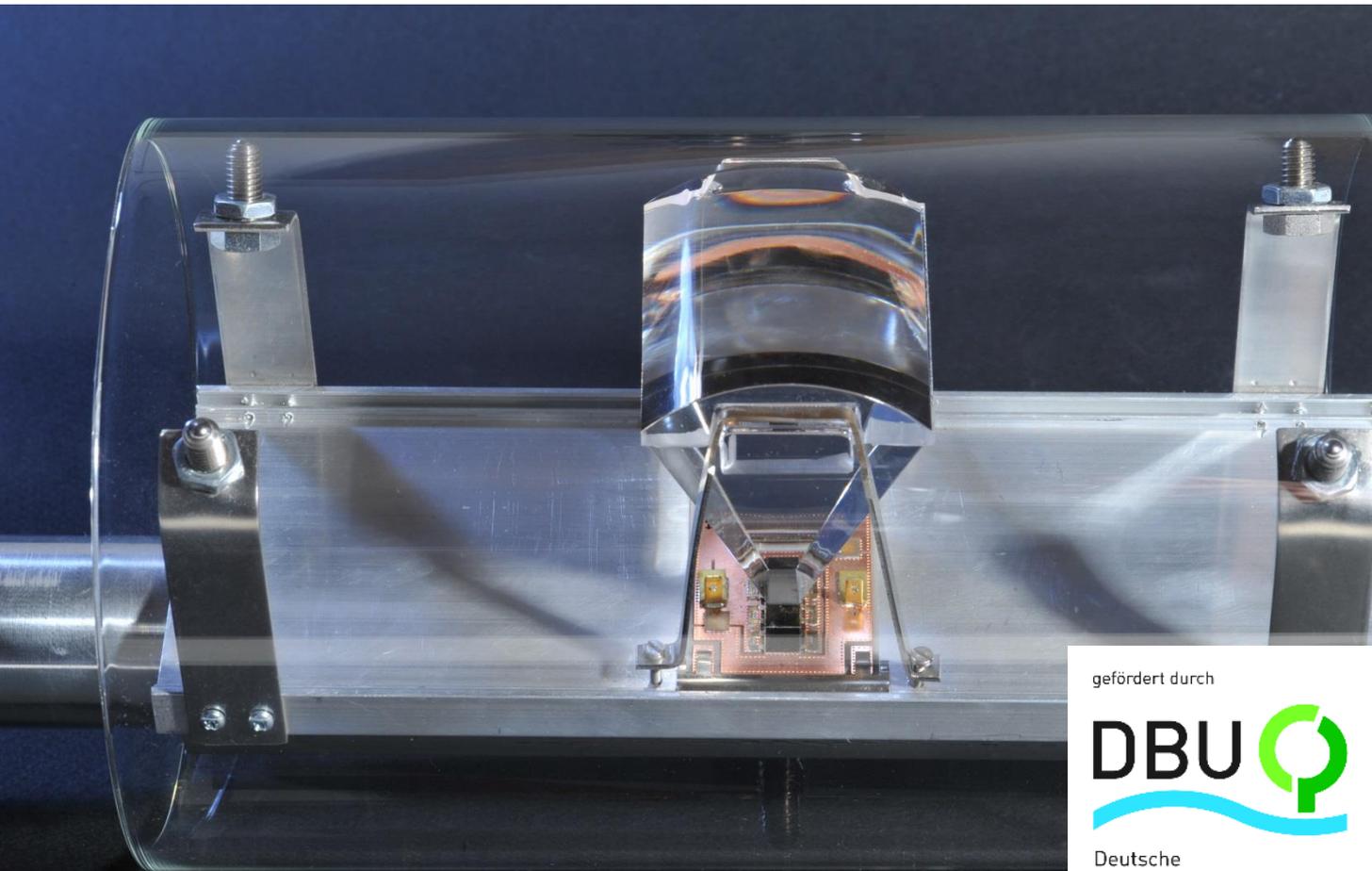
Double the Power.

SunOyster closes in case of storm into the flat and safe „Oystering“ position



Double the Power.

Heart of the SunOyster is the hybrid receiver with concentrator cells (44% electric cell efficiency)



gefördert durch



Deutsche
Bundesstiftung Umwelt

www.dbu.de

SunOyster.com

16 m² of SunOyster mirrors from serial production shall generate up to 5 kW electric and 7.5 kW thermal power



16 m² mirror = 16 horsepower (hp)



1

Manifold heat applications



Warm Water

50°C – 70°C



Room Heating

25°C – 90°C



Desalination

25°C – 120°C



Process Heat

60°C – 170°C

up to 170°C Heat



Cooling

55°C – 170°C



ORC Machine

90°C – 170°C



(Storage)

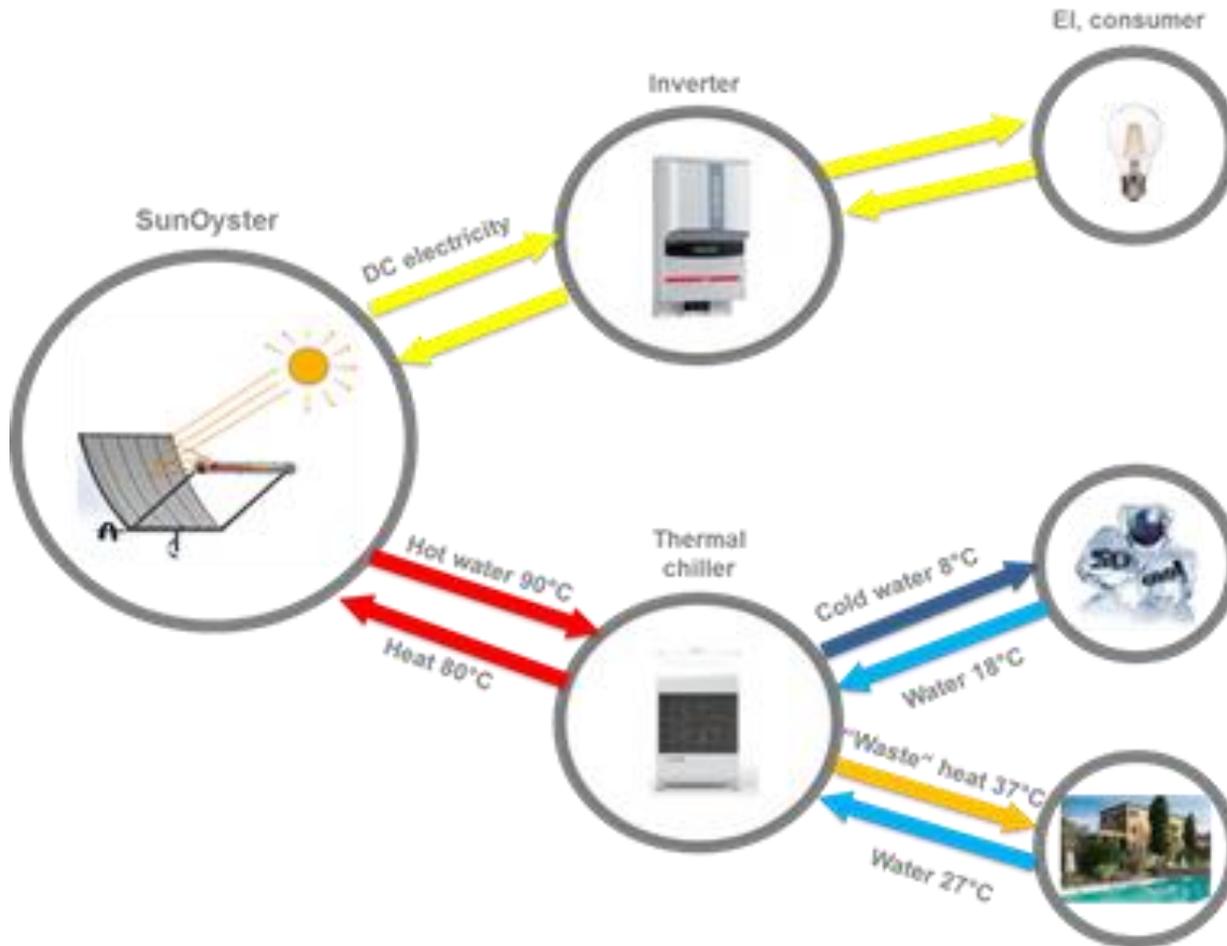
-30°C – 170°C



Pre-heating Steam Plants

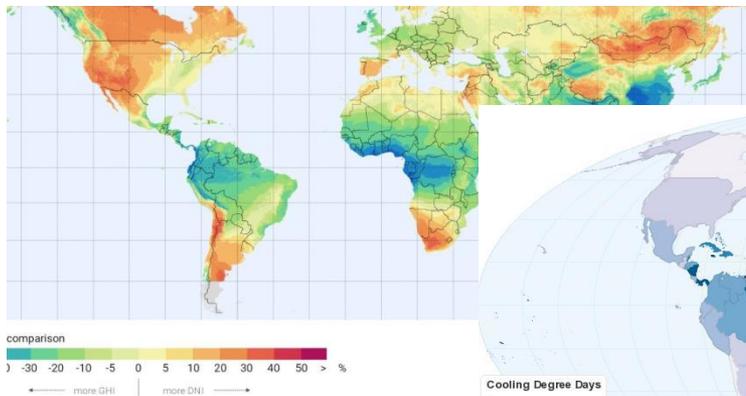
100°C – 170°C

SunOyster is optimal for solar tri-generation of electricity, heat and cold

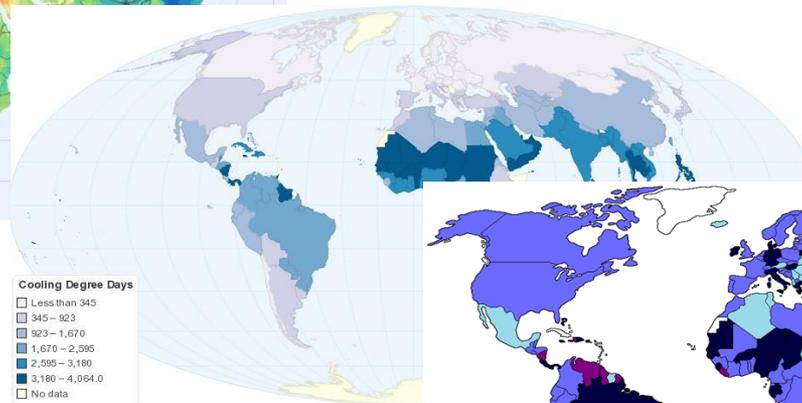


Italy and India turn out to be attractive markets after assessment of markets for tri-generation

DNI/GHI



Cooling days



Electricity price

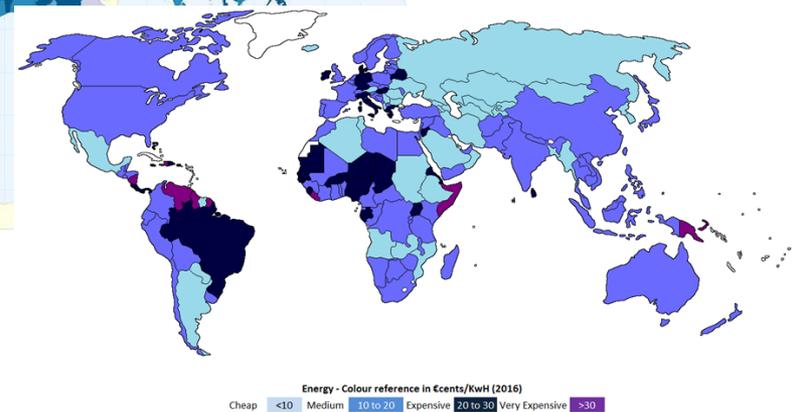
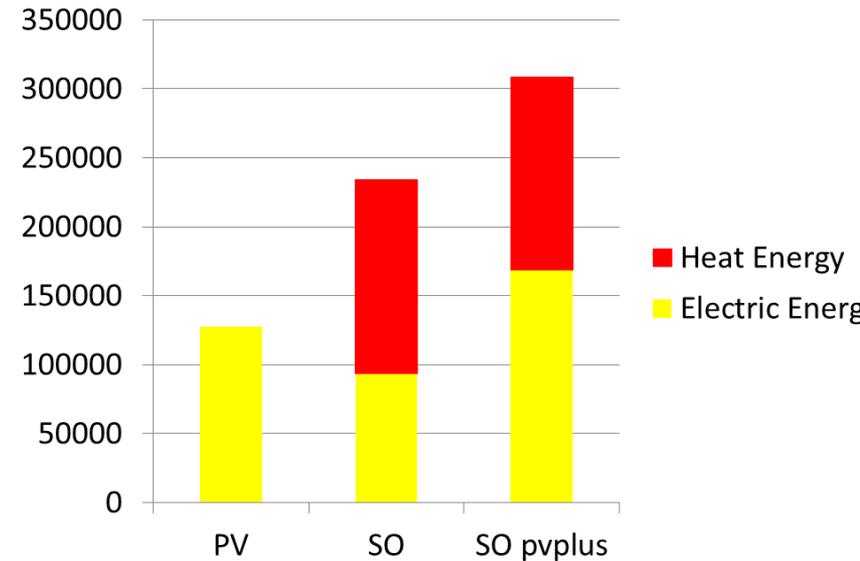
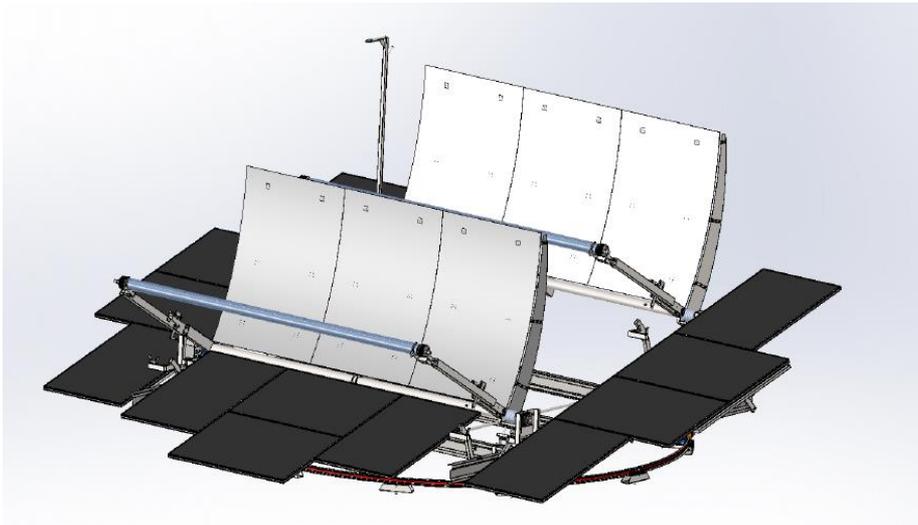


Fig. 12: Electricity prices in key countries (2016) – own graph based on [doing business.org/](http://doingbusiness.org/)

CAD of SunOyster *pvplus* – Maximum surface efficiency harvesting 2.5 x the energy of PV



Cooling with the SunOyster – SOS receives renowned seven-digit Euro grant to develop solar cooling



Looking for partners, especially thermal chiller manufacturers with <10kW power

Has anyone current news from manufacturers of small scale thermal chillers? (Purix? SolabCool?)

Installation of first pre-series machine



SunOyster Team



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Founder & GM



Amelie Krahl
Marketing, PR



Dr. Johannes Kneer,
Head Thermal



Stephan Ulrich,
Workshop



Martin Düsing,
CAD Expert



Roy Ehlers,
Head Electrical

Thank you for your attention.

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