PARTNER EVENT

BERLIN ENERGY TRANSITION DIALOGUE.25

ProSolNetz

20 March 2025 | 14:00 – 15:30 | EUREF Haus 24 (dena)

Up to 400°C: High-temperature solutions for solar process heat and district heating

ProsolNetz

- ProSolNetz: **'Process heat and district heating with concentrating solar collectors'**
- Collaborative project funded within the 7th Energy Research Programme of the BMWK
- Realised by consortium of research institutes, planning offices and technology providers
- Objective: support **use of concentrated solar thermal energy economically and technically successfully in German heating networks and for the generation of process heat**
- Promote market development by carrying out necessary technical developments and assessments, offering design tools and training for planners and industry and disseminating information about the technology
- Disseminate knowledge about the many possible applications of concentrating solar thermal energy

ProsolNetz – Stakeholders

Sponsors / Project organisation

Gefördert durch:

Bundesministerium für Wirtschaft und Klimaschutz

aufgrund eines Beschlusses des Deutschen Bundestages

ptJ Projektträger Jülich Forschungszentrum Jülich

Project partners

DLR Deutsches Zentrum für Luft- und Raumfahrt

Fraunhofer ISE

solites

DORNIER Group

protarget

RZVN Wehr GmbH

solarlite

Participation in subcontracting

BSW Bundesverband Solarwirtschaft

Solar-Experience

solrico

Steinbeis

Advisory board

dena Deutsche Energie-Agentur

VEA

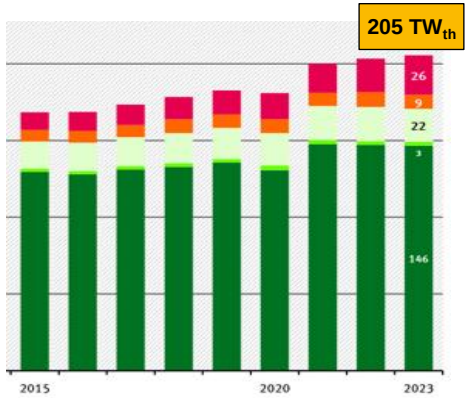
AGFW Der Energieeffizienzverband für Wärme, Kälte und KWK e.V.

NRW.ENERGY 4CLIMATE

dena Deutsche Energie-Agentur

Status Quo – German Heating Transition

- Heat accounts for more than 50 per cent of total German final energy consumption (FEC)
- Process heat has a cross-sectoral share of approx. 21 % of FEC
  - > 60 % share of industrial FEC | RE with <7% share of industrial FEC (2022)
- District heating accounts for ~ 8 % of total heat supply
  - RE with 20% and waste heat with 8% share
- **Renewable heat is still heavily dominated by biomass across sectors; share of renewable energies at 18,5%**
- Further sources of sustainable heat are needed, including solar thermal energy



Renewable Energy in Heating & Cooling (GER, 2023)

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Solar Thermal Energy in the Heating Transition

- Concentrating solar collectors as a key technology
- Particularity: deliver temperatures at and well above 100 °C at high efficiency
- By integrating storage tanks, the share of solar heat can be increased to 50 to 60 %
- Solar heat as an important component of a combination of various renewable energy technologies and efficiency measures
- Only 4% of solar thermal in renewable energy in German heating & cooling (2023)

Dena supports solar thermal applications in several BMWK projects

Turkish-German • Türk-Alman
Energy Partnership
Enerji Ortaklığı

Solar process heat in Türkiye and Germany

- Analyse and promote potential of concentrated solar thermal energy (CST) for supplying renewable process heat to industry
- Demonstrate the potential based on specific use cases in Türkiye and Germany
- Support both a rapid market ramp-up and decarbonisation of industries
- Milestones include
  - Initiation of Advisory Board with Turkish and German experts in solar thermal energy
  - Selection of Turkish and German partner companies
  - Elaboration of 2 – 4 CST potential analyses
  - Outreach and communication activities

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Thank You

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