SOLAR HEATING & COOLING PROGRAMME
INTERNATIONAL ENERGY AGENCY

Market Growth Made in Germany

Solar Academy Webinar, SHC Marked and Industry Trends
June 22, 2021

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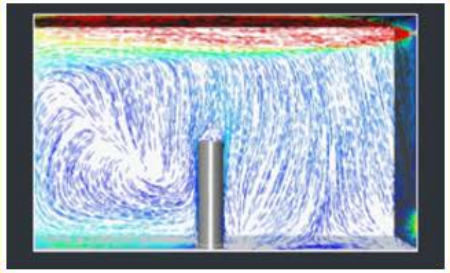
Agenda

… what you can expect in the next 15 min

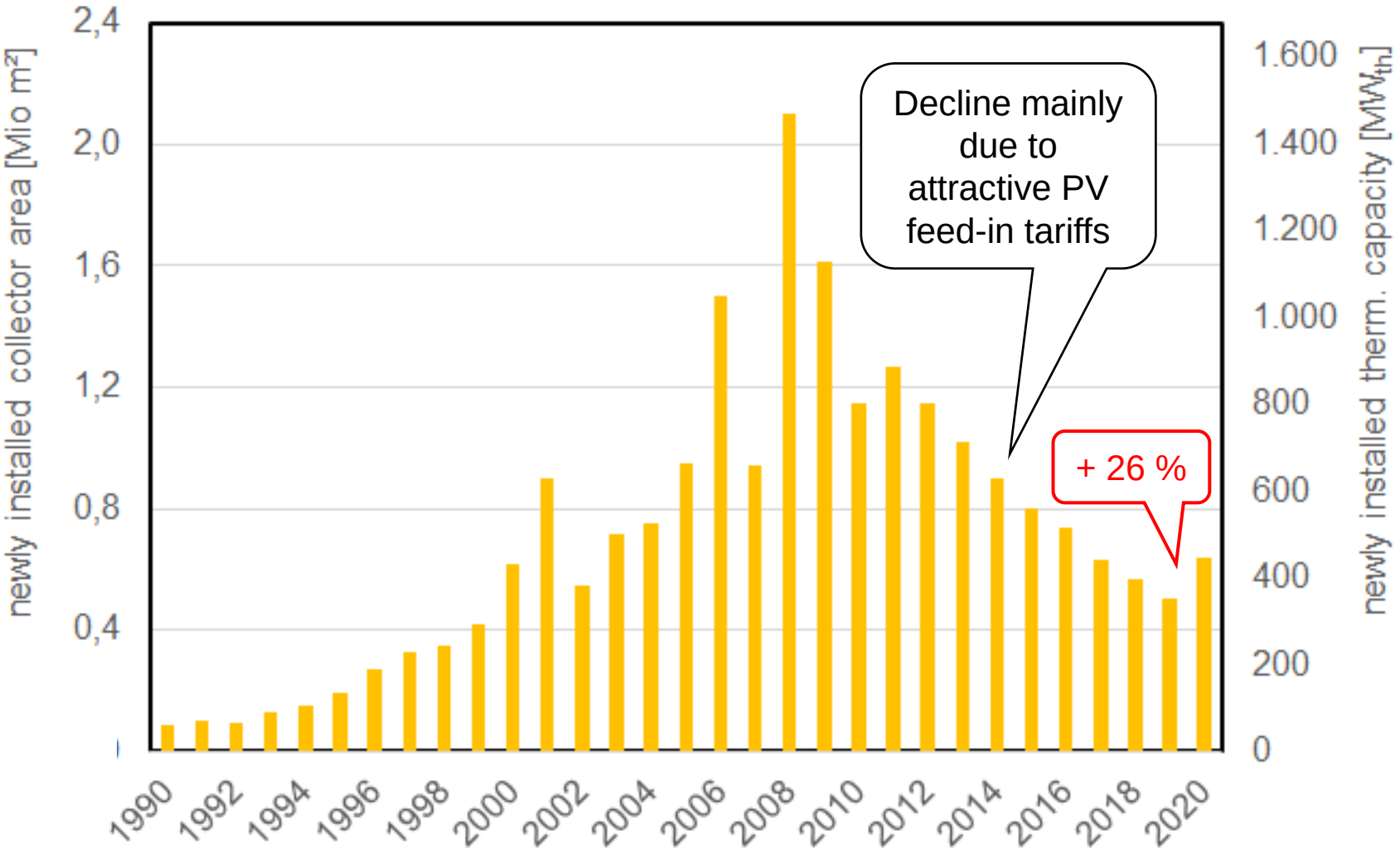
- ❑ **Intro to IGTE**
- ❑ **The German Solar Thermal Market**
- ❑ **Success factors**
- ❑ **Success story to come**
- ❑ **Market threats**
- ❑ **Quality assurance and product certification**
  → The Global Solar Certification Network
- ❑ **Summary and conclusion**

IGTE: Institute for Building Energetics, Thermotechnology and Energy Storage (former ITW), University of Stuttgart

Solar Technology	Energy Storage	Innovative Smart Citiy Concepts	Energy Efficiency
			
Testing and Inspections	**Solar and Energy Efficient Buildings**	**Cooling Technology**	**Indoor Climate Technology**
			

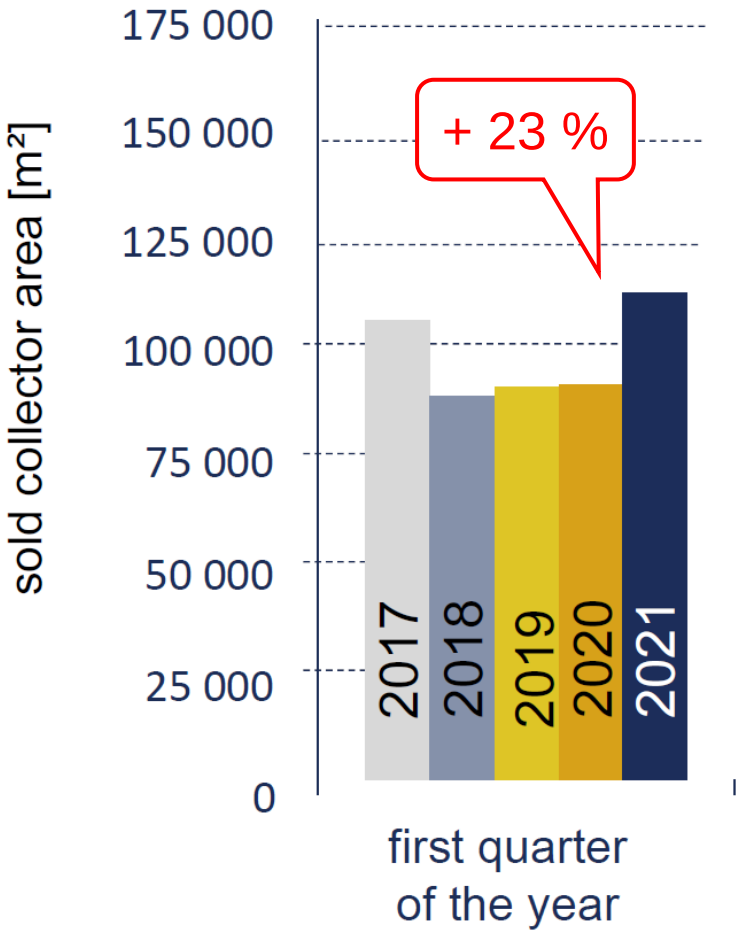
close cooperation with: SWT HLK STUTTGART DLR Institut für Technische Thermodynamik

German solar thermal market – long term evolution



Source: 2021\Sol_Maket_DE1

German ST market – the success story continues!



Data source:

BSW SOLAR

BDH
Bundesverband der
Deutschen Heizungsindustrie

German solar thermal market – Success factors

Implementation of new attractive incentive scheme by the end of 2019 with the following subsidy rates (examples)

- 30 % if a solar thermal system is added to an existing heating system
- 40 % if an old oil boiler is replaced by an efficient gas burner combined with a solar thermal system
- 45 % if an old oil boiler is replaced by an renewable heating system consisting of a solar thermal system combined with a biomass burner or a heat pump

Note:
Subsidy rates mentioned above are based on the total eligible costs. These include also additional work such as improvements of the heat distribution system or the installation of a new chimney. Subsidy rates are reimbursed by the federal state of Germany.

Source: 2021\Sol_Maket_DE1

German solar thermal market – System types

In 2020 approx. 11.000 systems were subsidised according to the new incentive scheme.

- approx. 75 % are solar thermal systems for combined hot water preparation and space heating (combi systems) Average system size collector area around 11 m²
- approx. 25 % are solar hot water systems
- approx. 3 % are systems for solar active houses (houses with solar thermal fractions > 50 %)

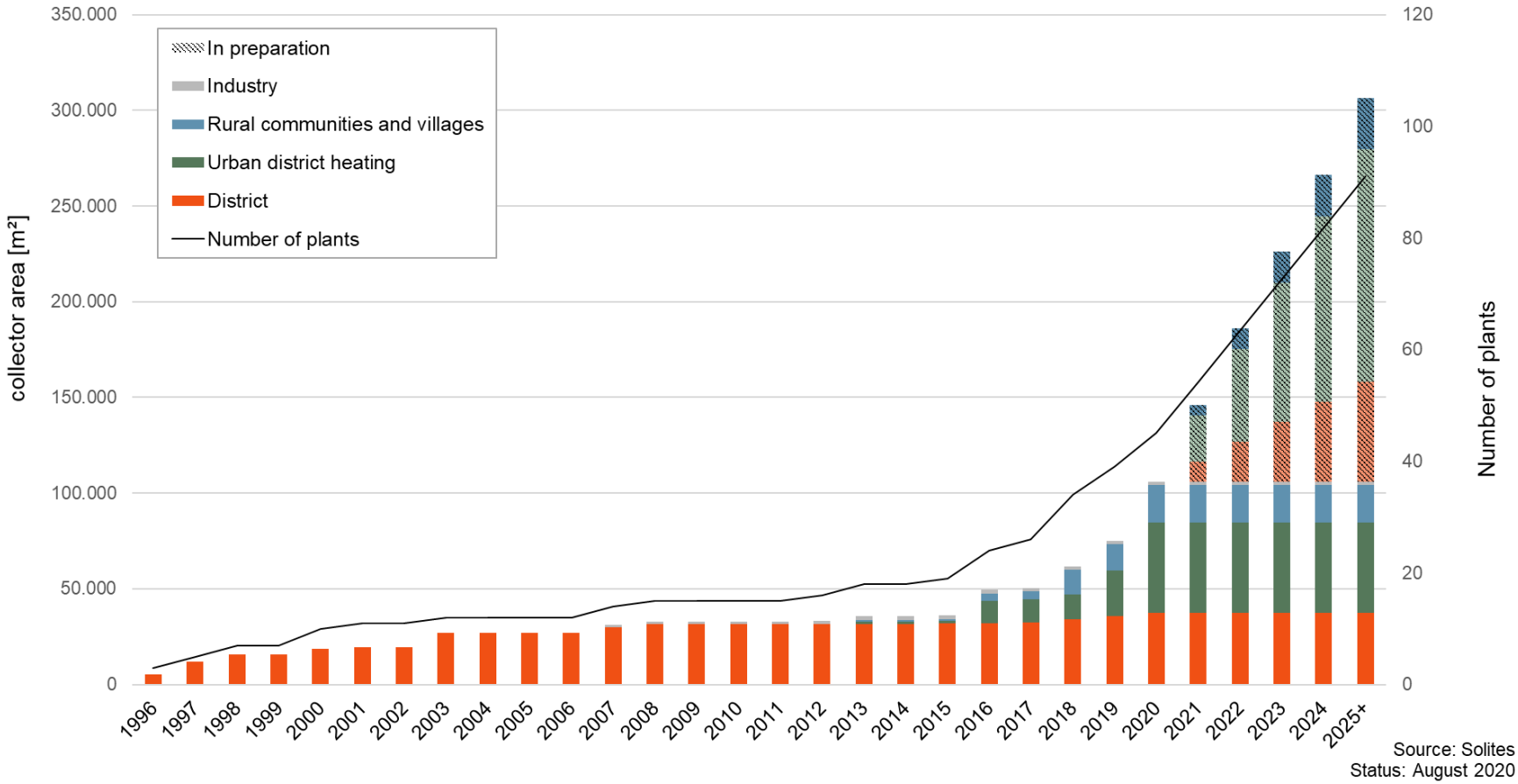
and

- approx. 42 % of the solar thermal systems were combined with a gas burner

Source: 2021\Sol_Maket_DE1

German solar thermal market – next success story to come

Lage scale systems (with > 1.000 m² collector area)



Source: Solites
Status: August 2020

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German solar thermal market – threads

Dark clouds appear on a sunny sky

Sources:
https://www.wetterdienst.de/Deutschlandwetter/Thema_des_Tages/3595/warum-ist-der-himmel-blau
https://www.fotocommunity.de/photo/dunkle-wolken-ueber-straubing-hades01/22061463

German solar thermal market – threads

Solar Obligations

- More and more federal states and cities in Germany implement so-called solar obligations
- In many cases these solar obligations are de-facto PV obligations requiring the installation of PV-panels on the roofs of new or fundamentally renovated buildings.
- **--> Such solar / PV obligations are a "killer" for solar thermal technology**

Be aware of this problem!

If solar obligations are under discussion than promote a technology-neutral solution.

This means a solar obligation requiring the installation of solar thermal systems, PV systems or a combination of both.

Quality assurance by product certification

- High quality products are a key factor for a long-term market success
- Hence only certified solar thermal products should be considered as eligible with regard to incentive programs or legal requirements
- Build on well established certification schemes for solar thermal products such as Solar Keymark, SRCC, Golden Sun, Water Mark

Leading solar thermal industries, certification and inspection bodies as well as test labs of the world cooperate within the Global Solar Certification Network (GSCN)

Global Solar Certification Network

Aim

- Facilitate worldwide cross-border trading for manufacturers of solar thermal quality products
- Avoid re-testing of products and re-inspection of production lines when entering new markets
- Has established this spring an alliance with the Solar Heating Initiative (SHI) for the global implementation of the SOLERGY label

Solar Heating Initiative
For CO_2 - free heat

Leading to:

- Increased quality
- Lower costs
- Bigger market - better business ☺

Further info: www.gscn.solar

Summary

If appropriate boundary conditions are provided solar thermal markets can grow.

This means

- Fair economic conditions between the different renewable energy technologies
- An appropriate legal framework
- Awareness with regard to investors and users
- Certified high quality products
- Skilled and experienced installers
- ……

No climate neutral energy system without considering the heating and cooling sector!

No climate neutral heating and cooling sector without solar thermal energy!

www.iea-shc.org

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Thanks for your attention

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