

# The Solar Thermal Market in Germany One Year After the Decision to Phase Out Nuclear Power

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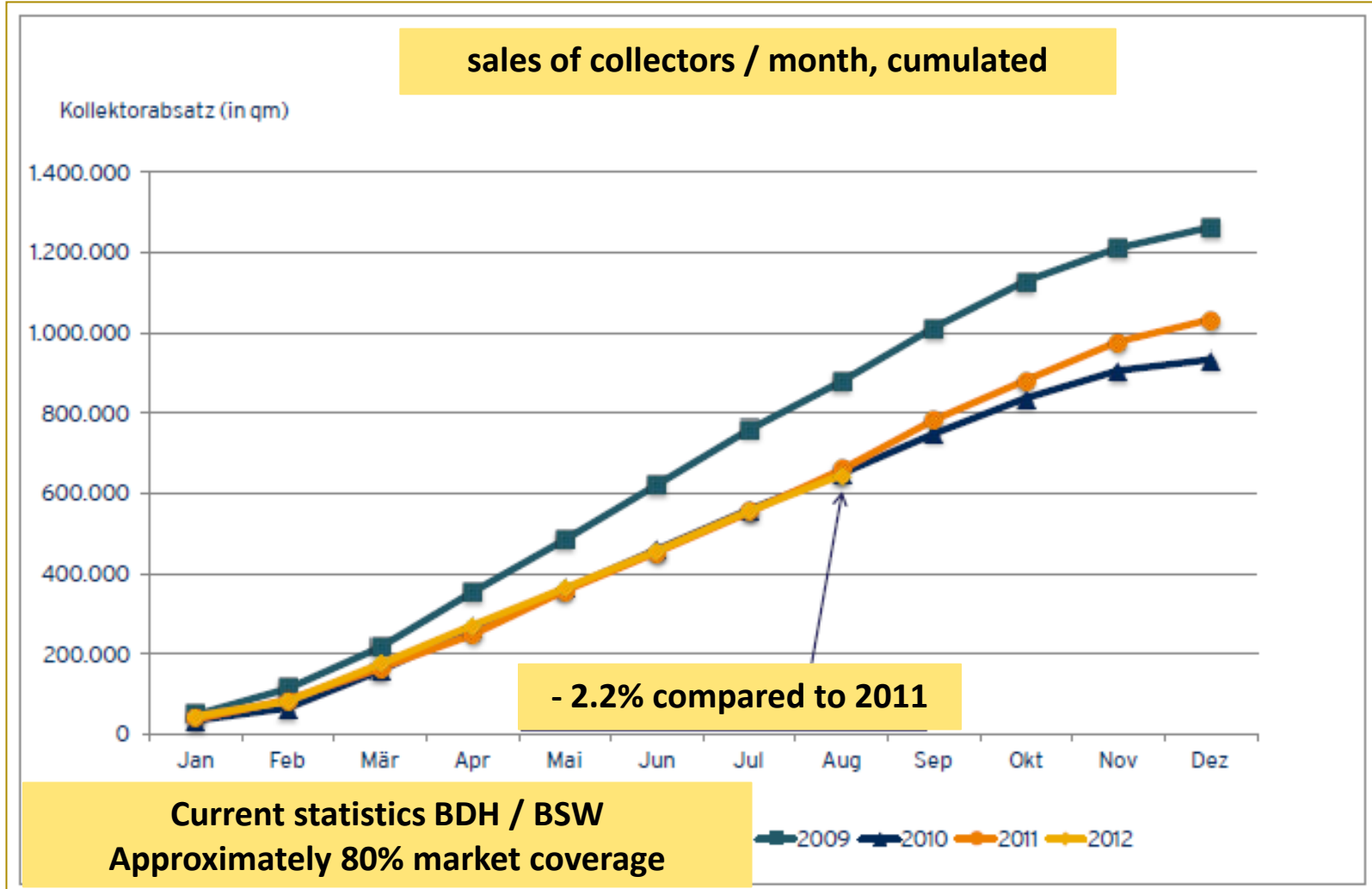


Gütegemeinschaft Solarenergieanlagen  
(Quality Association for Solar Energy Systems)  
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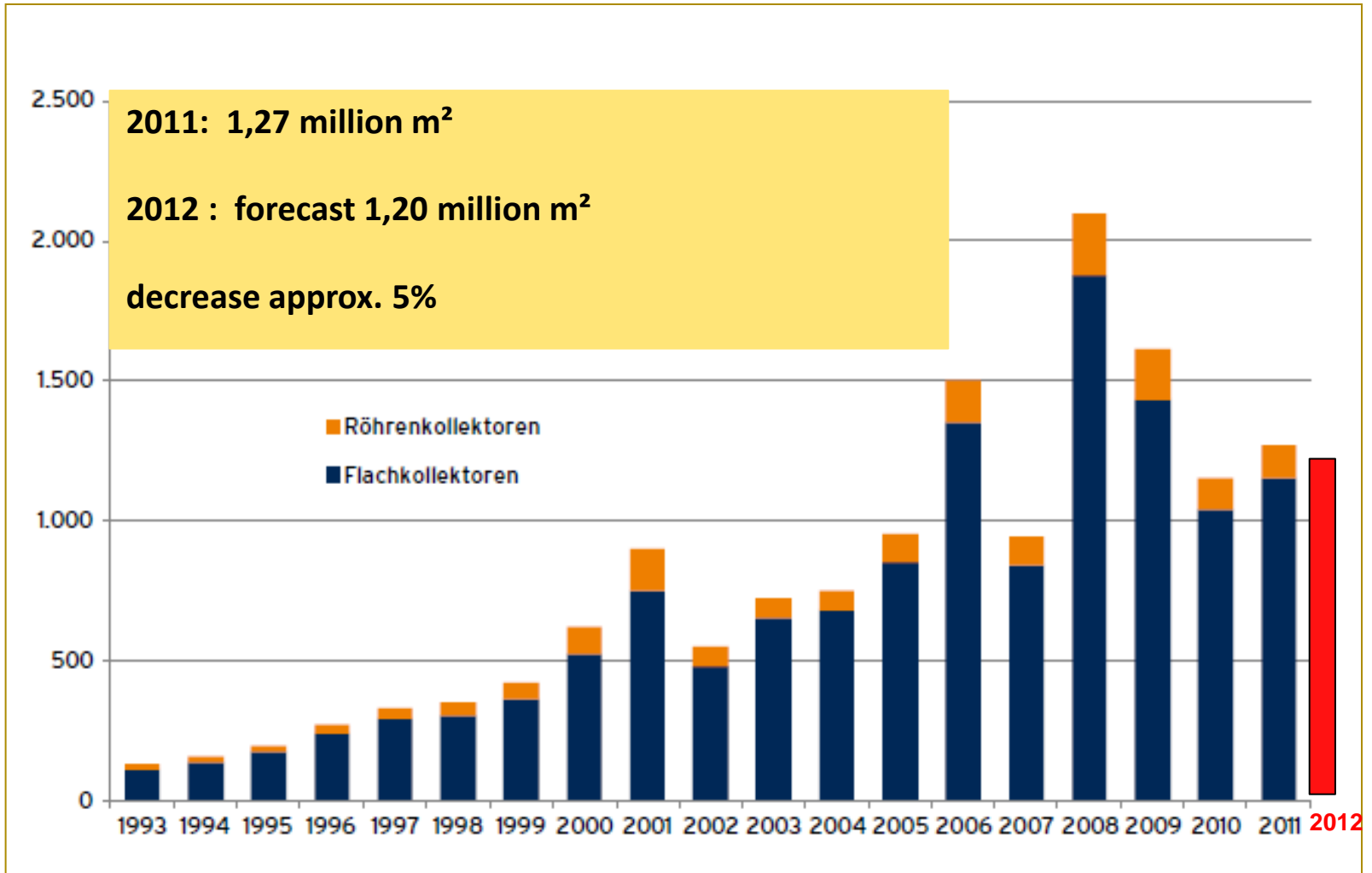
# The solar thermal market in Germany one year after the decision to phase out nuclear power

- Current state
- Problems
- Trends
- Perspectives

# Current state August 2012



# Current State - Forecast 2012



# Problems: PV competing with solar thermal systems

## PV competitor for roof space

- PV area of approximately 10 m<sup>2</sup>/kWp
- Roof average detached house 50 m<sup>2</sup>
- Systems from 2.5 to 5 kWp



## PV competitor for investment sums

- Small systems in 2012: 2,000 to 2,500 €/kWp
- Cost: € 5,000 to € 12,500

## Difference to solar thermal

- PV market is growing - solar thermal market stagnating
- PV systems: yield (decreasing)
- Solar thermal systems: only cost savings

**Consequence: decision often for PV**

## Problems: announcement of new laws

### Problem

- Government announces new laws
- Time delay in implementation – weeks, several months, 1 year

### Consequence

- Building owners wait

### Typical examples of laws stuck in legislation process

- Law on tax depreciation and modernization of buildings (announced 1 year ago)
- Bonus for replacement boiler (announced 3 months ago)
- Change in Tenancy Law (announced 3 years ago)



# Main problem: modernization backlog in the heat market

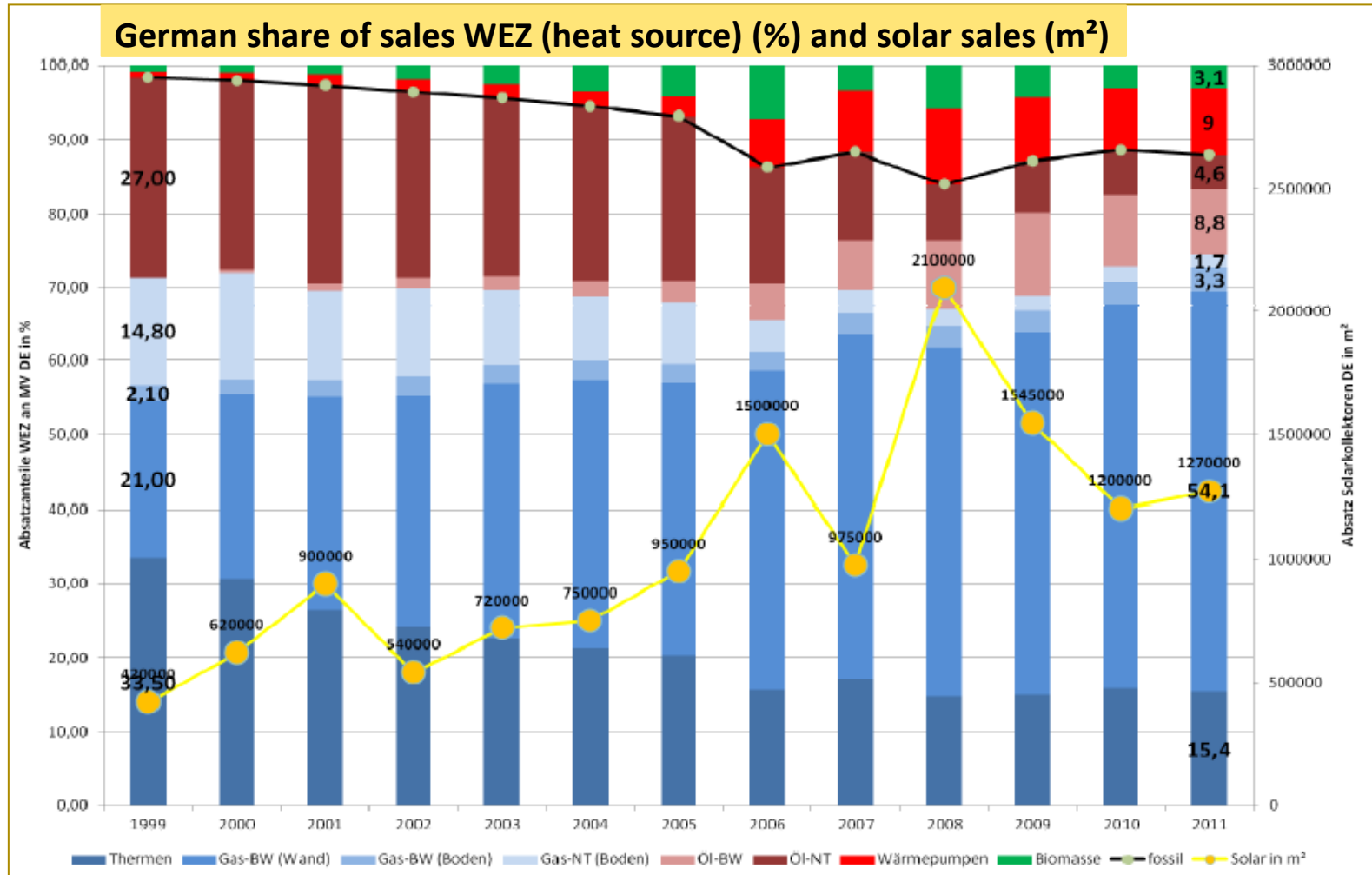
## Assessment of Industry (BDH) July 2012

**"Federal and State governments cause delay in modernizing energy efficiency in buildings"**

### Portrait BDH:



# Heating market Germany - structural analysis (BDH 2012)





## Development tendencies in the heat market

- solar thermal: stagnation/decline
- gas: market share stable, share of condensing systems rising
- oil: market share declining, share of condensing systems rising
- heat pumps: market share rising
- biomass: market share low, stagnant
- BDH statistics reliable for accurate evaluation

**Question of principle for the German solar thermal market**

**Related to developments in other systems?**

## Essential results analyses BDH

- solar thermal sales closely related with sale of other heating systems
- 80 percent of solar heat sold in connection with the renovation/construction of heating systems
- combinations of systems "heating + solar thermal" dominate the German market
- most common system combination: condensing systems + solar thermal



**Source: BDH May 2012  
Symposium on Solar Thermal OTTI**

# Technical Development Tendencies

## Industrial prefabrication of system hydraulics

Objectives:

- Reducing installation costs
- Avoiding errors in hydraulics and control

Typical examples:

## Interface modules for condensing systems / solar system



System RMS Cosmo



System RAS Sonnenkraft

**“Ready to connect” complete systems for domestic heating**  
typical examples



**System Cerapur Bosch- Junkers**



**System RATIO kompakt Wagner**

## Present time

- Different market development in new and existing buildings

## New construction

- In new buildings the use of regenerative heating energy is required by law since 2009 (EEWärmeG)
- Solar technology in competition with thermal insulation, heat pumps, district heating, biomass
- Number of regenerative systems is only dependent on construction activity
- **Number of solar systems in new buildings rising since 2009**

## Prospects for solar heating in new buildings

- Depending on the new law 2012/2013
- Change of **Energy Saving Regulations EnEV**
- Change of **Regenerative Energies Heat Act**
- Tougher regulations for new buildings are being planned for 2013/2014
- Essential details still unknown

## General forecast for solar heating in new buildings

- **In 2012, German construction industry predicts ongoing construction activity for the coming years**
- **Solar heat can benefit from this activity**

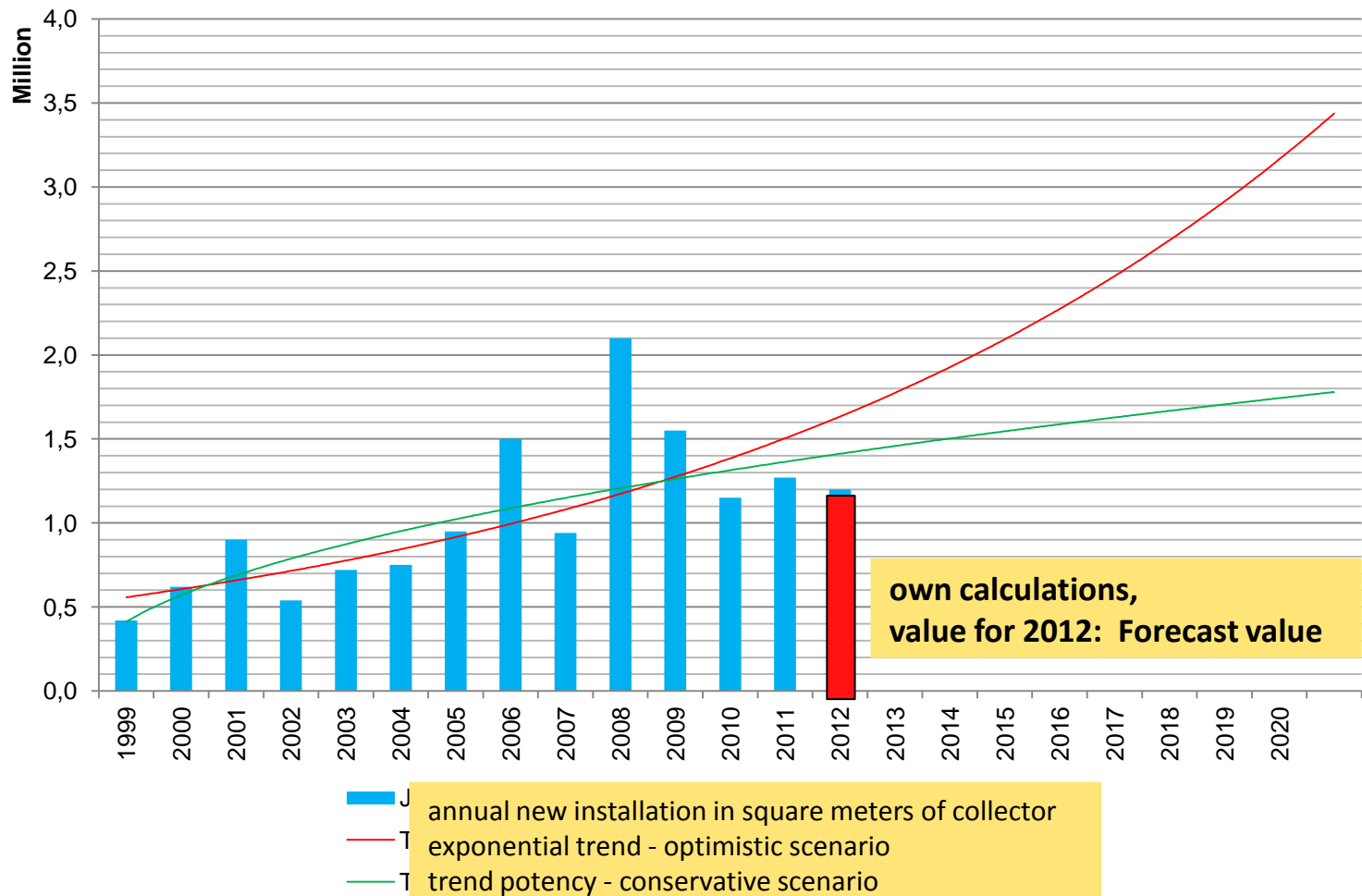
## Existing buildings – present day situation (2012)

- Modernization backlog of buildings and heating systems
- Use of solar heating systems declining
- No legislation to modernize

## Prospects for solar heating in existing buildings

- Federal government plans to double rate of modernization
- Building stock Germany: 24 million
- Present quota modernization: <1%
- Policy objective: 2%
- **Legal provisions for modernization still unknown**

## Forecasts New install in square meters of collector





## Resumé 15 months after decision to phase out nuclear power

- German solar thermal market in decline
- main reasons: competition with photovoltaic, delays in announced government measures for buildings
- industry and installation businesses require rapid implementation of the measures announced
- under favourable political conditions in Germany, by 2020 up to 4 million new square meters per year may be possible

I thank you for your attention  
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