



European Union 22-26 March 2010
Sustainable Energy Week

Take a week to change tomorrow

Solar thermal and hybrid solutions for energy efficient buildings

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ESTIF Secretary General



European
Partners for the
Environment

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European Solar Thermal Industry Federation

- Industry members covering the whole value chain
 - Solar panels, solar systems, components, service providers to the industry, test institutes, research centres
- Powerful national associations
- Mission:
 - Representation and promotion
 - Centre of expertise on ST
 - Forum for the industry
- Achievements:
 - Renewable heating and cooling in RES directive
 - Solar Keymark
 - *Eco design and energy labelling?*



Solar Thermal in Europe

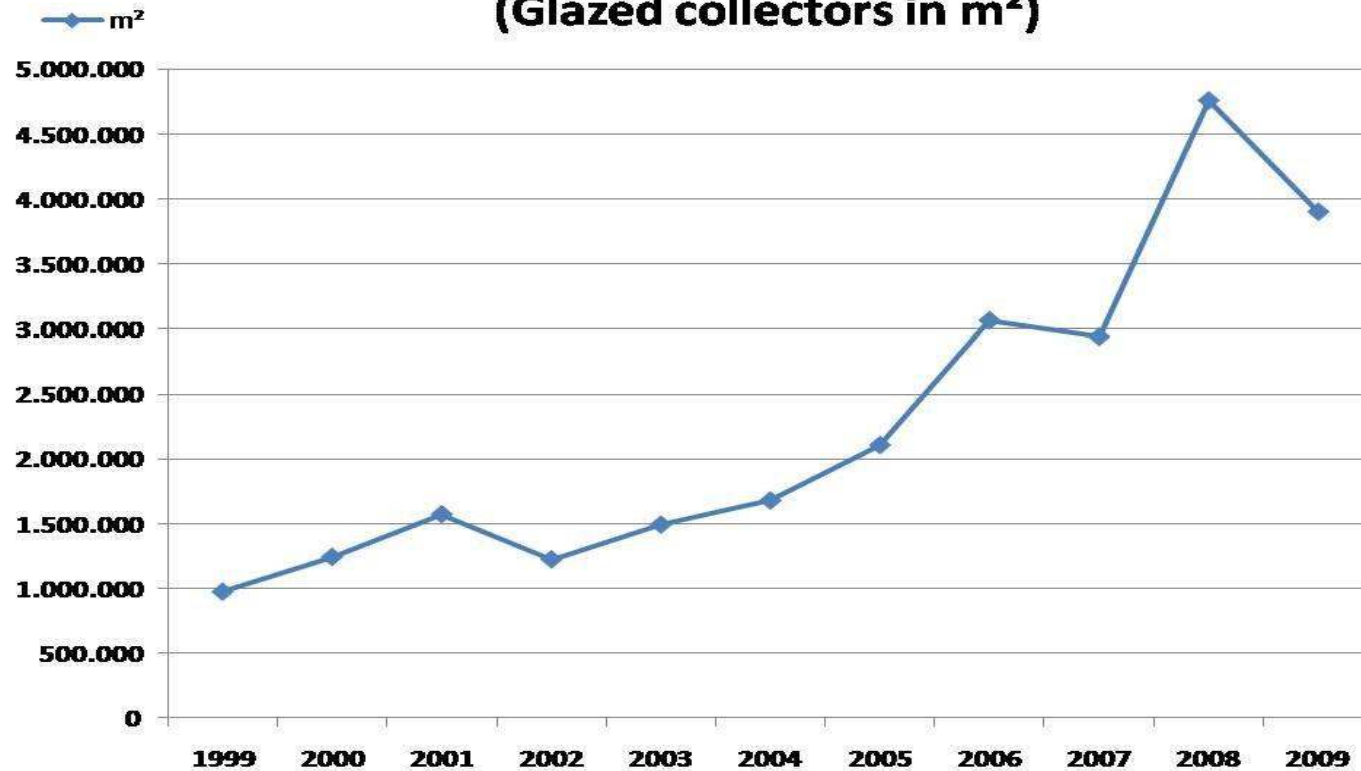
- Solar Thermal accounts for approximately 0,2% of the low temperature heat demand (<250 C°) in the EU 27 (2006)
 - Spain (0,22%), Poland (0,02%), Germany (0,3%), Denmark (0,2%), Austria (5%)
- Two types of strong markets:
 - Greece, Cyprus, Turkey (high level per capita)
 - Austria, Germany, Denmark (combi systems and large ST)
- Champions of tomorrow:
 - Spain, Italy, France, Poland



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EU Solar Thermal market 1990-2009

**Solar Thermal Markets in EU 27 and Switzerland
(Glazed collectors in m²)**



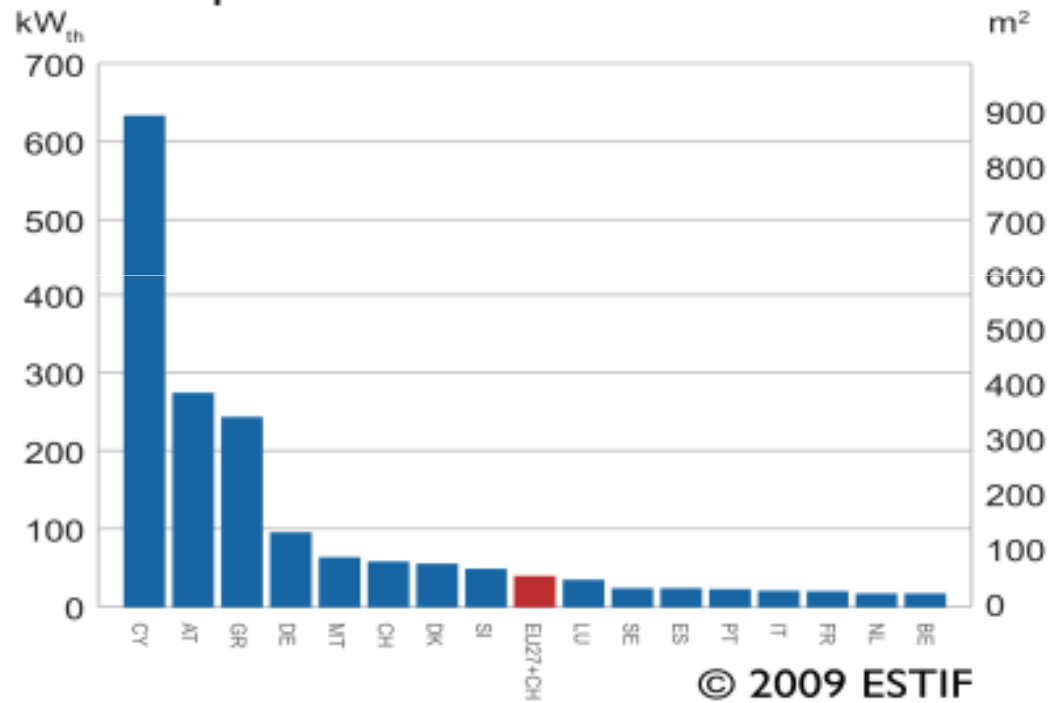
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Great opportunities in Europe

Solar thermal capacity in operation per 1 000 inhabitants in 2008



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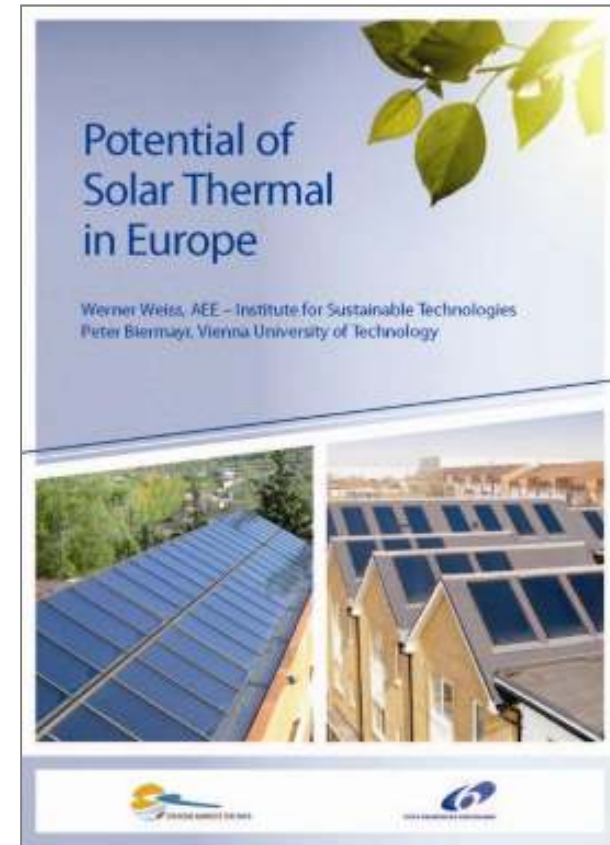
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Future development and potential

- **“Full R&D and Policy”** scenario (most ambitious scenario out of three) considers substantial financial and political support mechanisms, energy efficiency measures as well as intensive research and development activities.
- Solar fraction of low temperature heat 2020: 3,6 % (9% reduction of energy demand, reference 2006)
- Solar fraction of low temperature heat 2050: 47% (31% reduction of energy demand, reference 2006)



Hybrid systems

- Terminology:
 - Combi systems: heating systems with solar fraction which covers all or part of the space heating (SH) and domestic hot water (DHW) demand
 - Hybrid systems: heating systems (SH and/or DHW) which combine solar thermal with another heat source
 - Solar active houses: building with top level energy efficiency allowing a 100% solar fraction
 - Back-up heating: the other heating source in a solar thermal heating system



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Hybrid systems

- Solar thermal can be and is actually combined with all other heat sources
 - Biomass
 - Heat pumps
 - Gas boilers (also LPG)
 - Heating oil
 - Electric boilers (combined PV-ST)



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Hybrid systems

- Solar thermal in combination with fossil fuels offers specific advantages:
 - Part of the heat demand is provided by ST!
 - The load profile (i.e. efficiency) of the fossil fuel boiler is improved
 - Solar thermal can be retrofitted/combined with existing boilers

*ESTIF warmly welcomes the initiative of
EUROFUEL*



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Solar thermal and energy efficient buildings

- Solar thermal industry is linked to the construction sector not to the energy sector (power production and transport)
- We share the same topics:
 - New buildings (EPBD recast): *As of 31 December 2020 new buildings in the EU will have to consume 'nearly zero' energy and the energy will be 'to a very large extent' from renewable sources.*
 - The energy-efficient retrofitting of Europe's existing building stock (*Re-Building forum*)



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Renewable Heating and Cooling: Which technologies to trigger the market uptake

- From ESTTP to RHC-Platform
www.rhc-platform.org
- The “third pillar” has now its own Technology Platform
- Kick-off in Bilbao: **1st Annual Conference of the European Technology Platform on Renewable Heating and Cooling, 23-24 February**
- Support from the EU Commission



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THANK YOU FOR YOUR ATTENTION



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