

European Solar Thermal markets

Estimation of Solar (thermal) Potential in Europe

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Introducing ESTIF

- European Solar Thermal Industry Federation
- Representing the solar heating and cooling sector at EU level
- 100 members, representing >95% of the market
- A founding member of EREC
- Based in the Renewable Energy House, Brussels



Thanks!!!

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Intelligent Energy  **Europe**



Transfer of experience for the development of Solar thermal products

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Solar Thermal Potential in Europe

- Renewable Heating and Cooling
- Innovation
- Market Development
- Executing the potential



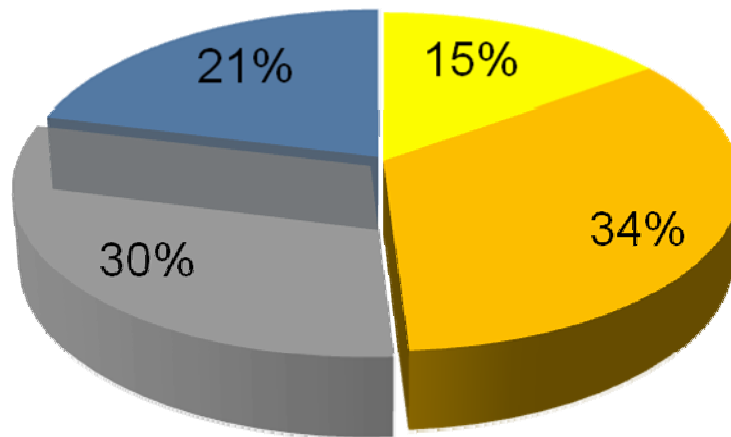
Renewable Heating and Cooling

- Includes
 - Solar Thermal
 - Geothermal
 - Biomass
- Represents 49% of the total energy consumption in EU27
- Solar Thermal Energy \neq Solar (Thermal) Power



Total Final Energy Consumption in EU 27 and share of heat - 2006

[Total: 13,609 TWh]

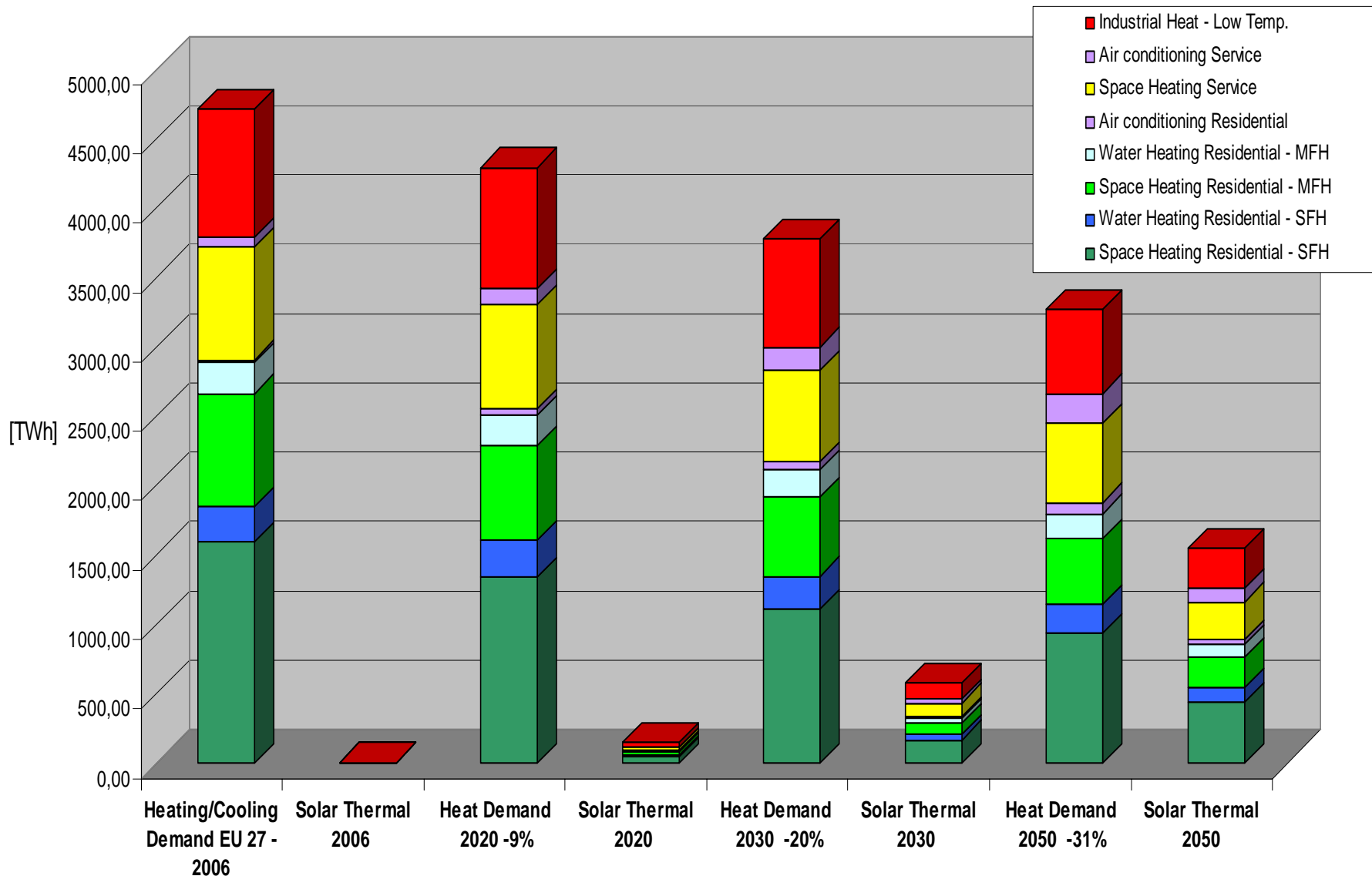


- Low Temperature Heat < 250°C
- High Temperature Heat > 250°C
- Transport
- Electricity



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Contribution of Solar Thermal to the EU 27 Heating and Cooling Demand by Sector



Innovation

- Much more than ...
...Domestic Hot Water
- Or even
- Space Heating (Combi Systems)



Velux/ESTIF



It's also...

- » Industrial Process Heat
- » Solar Cooling
- » Water Treatment (desalination)

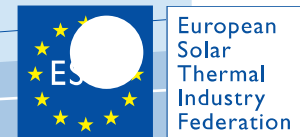
New applications

- Much more than ...
...conventional add-on
approach (*on-roof mounting*)



It's also...

New and developed forms of
integration into the buildings



Integrating solar thermal into buildings



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Integrating solar thermal into buildings



Market Development

- A booming market
 - Strong industry
 - Constant steady growth
 - Huge growth potential



A strong and growing industry

- 3.3 GWth of newly installed capacity in 2008
- 19 GWth of capacity in operation
- Turnover above 3.000 mEUR/year
- 40.000 full time jobs (most in small and medium size installation businesses)

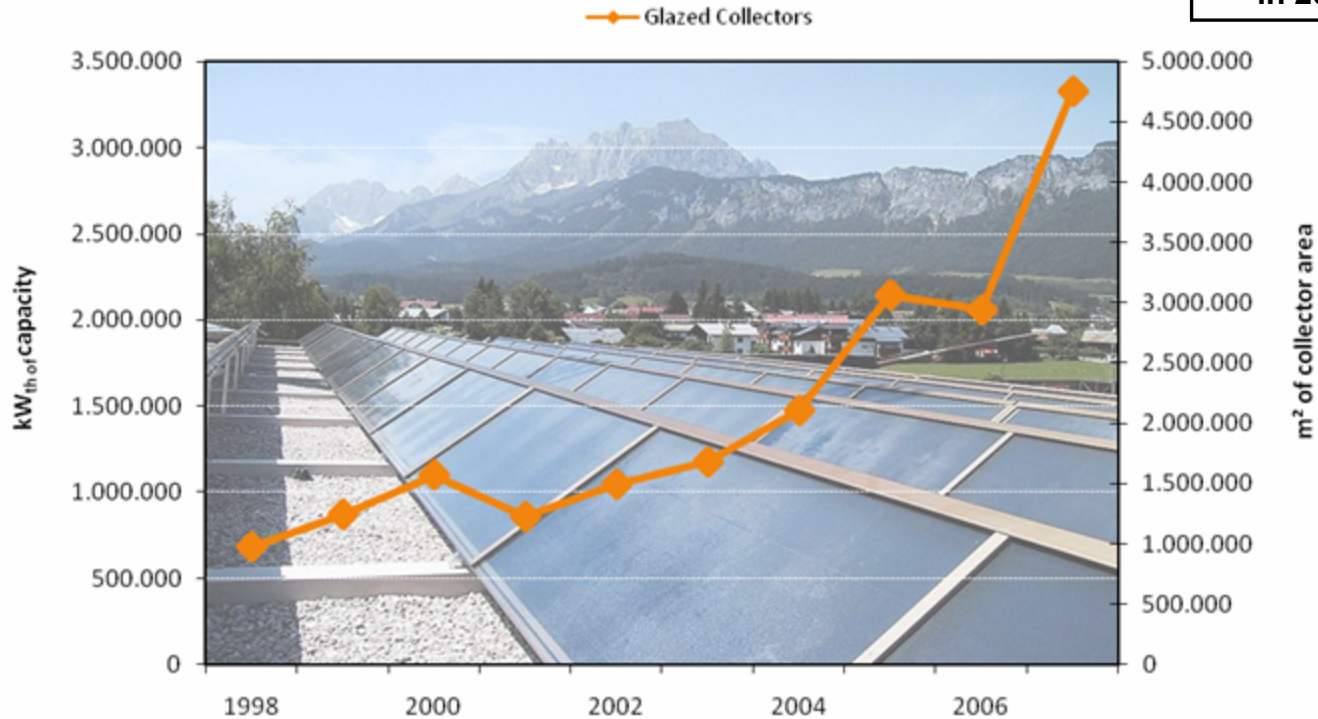


GASOKOL/ESTIF

EU Solar Thermal market 1990-2008

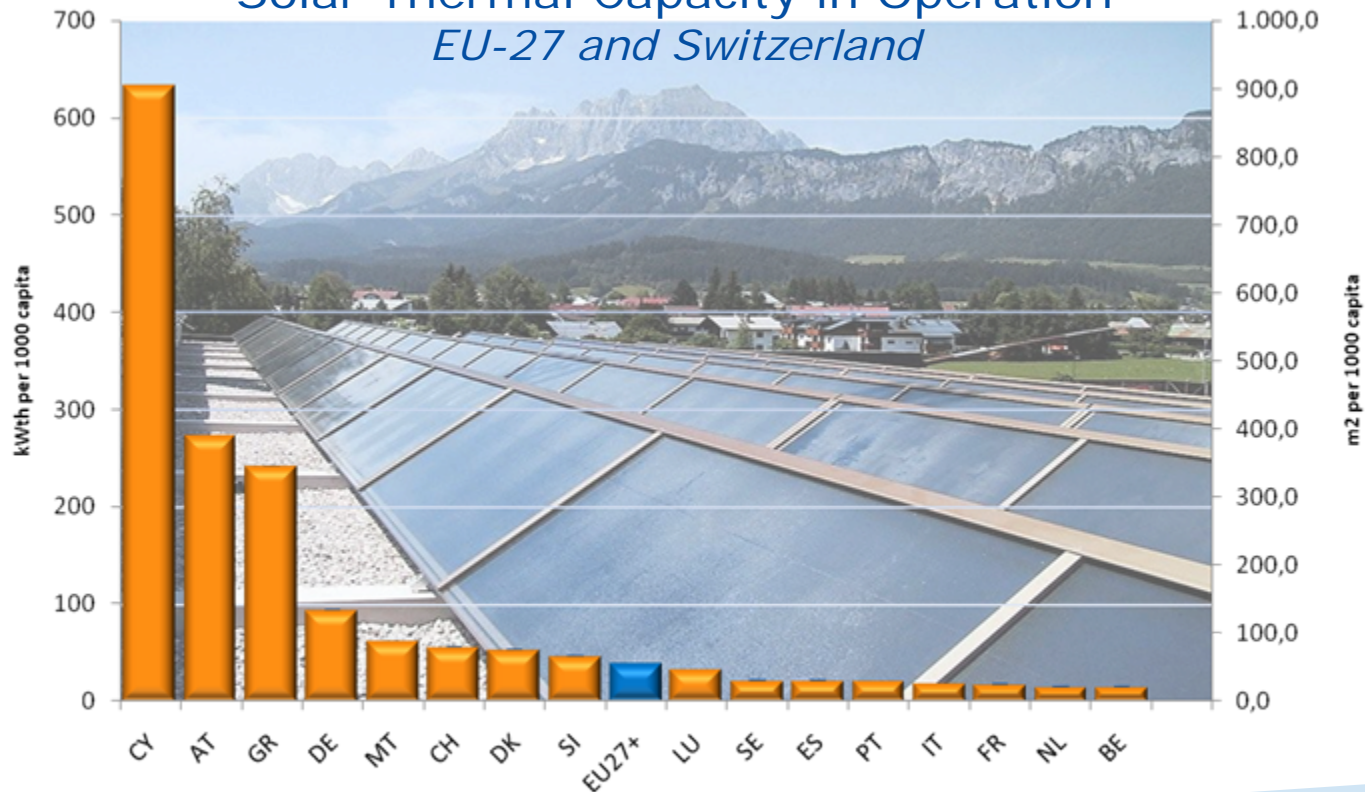
Solar Thermal Collector Market in EU-27 and Switzerland

**~3.3 GW_{th} of
new capacity
in 2008**

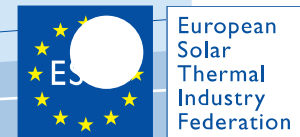


Great potential for Growth

Solar Thermal Capacity in Operation
EU-27 and Switzerland



Glazed collectors in kW_{th} and m² and per 1000 capita



Future development and potential

- Forthcoming study shows:

- Heating and cooling responsible for almost 50% of final energy demand in Europe; 75% of this in low-temperatures
- 50% of low-temperature heating and cooling could come from solar thermal (long-term)
- >450 000 sustainable full-time jobs could be created by 2020



Wagner & Co/ESTIF



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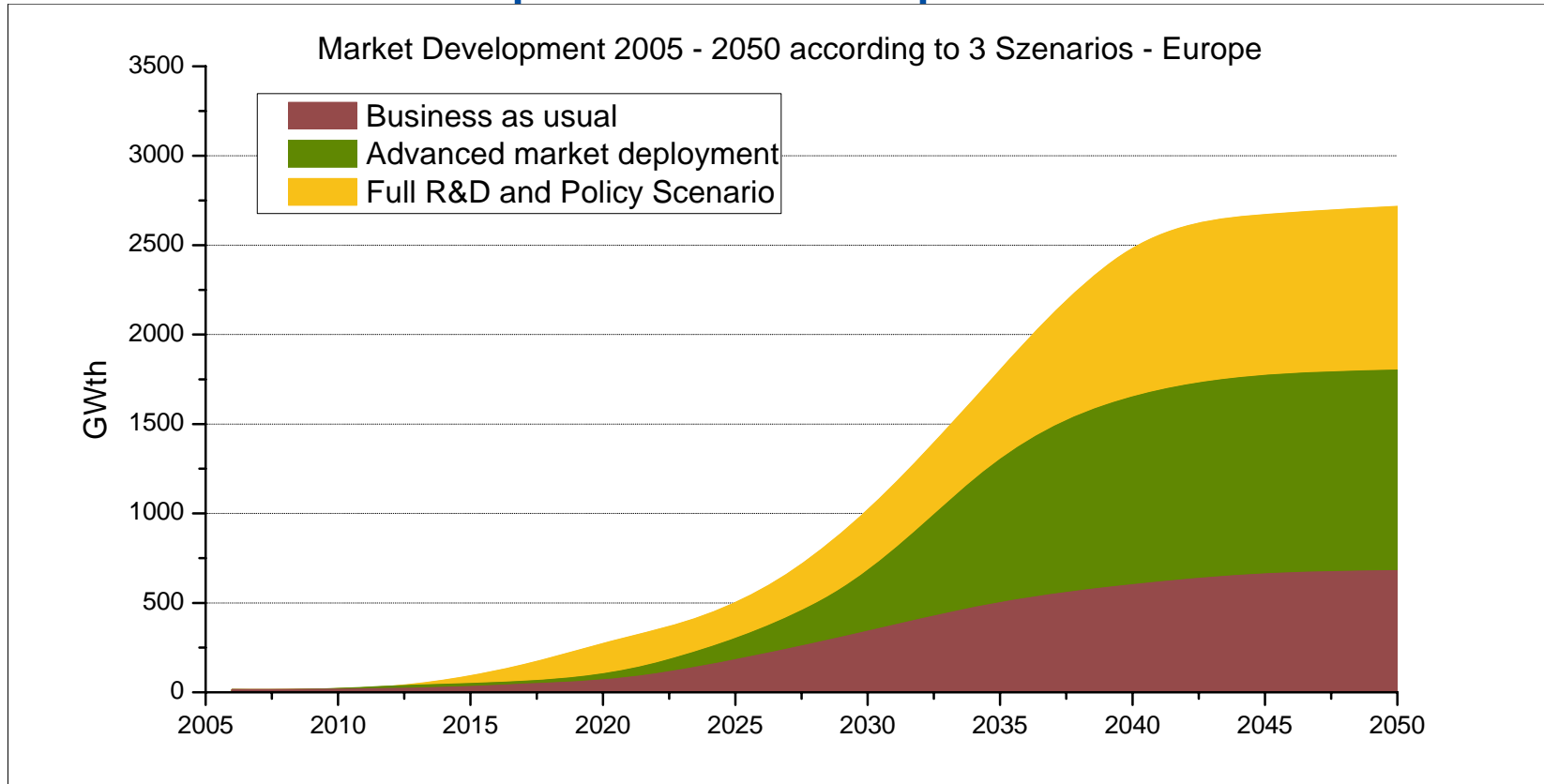
Solar Thermal Potential Study

- 3 milestones
 - 2020 / 2030 / 2050
- 3 Scenarios
 - BAU: Business as Usual
 - AMD: Advanced Market Deployment
 - RDP: Full R&D and Policy

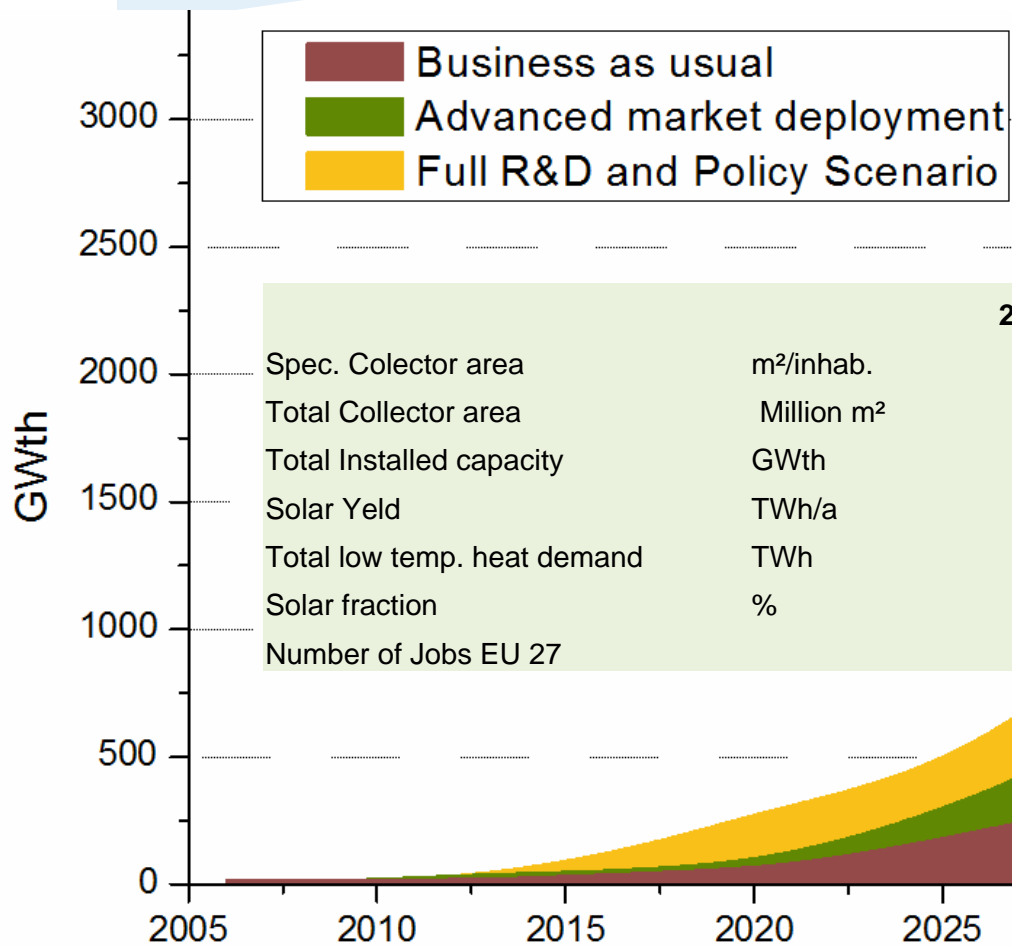


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Future development and potential



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		2006	BAU	2020 AMD	RDP
Spec. Colector area	m ² /inhab.	0,04	0,2	0,3	0,8
Total Colector area	Million m ²	20,25	97	145,5	388
Total Installed capacity	GWth	14,17	67,9	101,9	271,6
Solar Yield	TWh/a	8,5	38	59	155
Total low temp. heat demand	TWh	4715	4715	4506	4297
Solar fraction	%	0,18%	0,81%	1,31%	3,61%
Number of Jobs EU 27		31.400	46.900	103.200	470.000



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Executing the potential

- Promoting Market Growth
 - Ambitious National Targets
 - Coherent measures
 - European approach (...Solar Keymark...)
 - Not an EU exclusive
 - Not only at National level
- Transposing to National legislation the 'Renewables Directive' (20/20/20)



Ambitious Targets & Coherent Measures



European Solar Thermal Markets

- Awareness Raising
 - Accessible technology
 - Practical/effective
 - Not miraculous



European Solar Thermal Markets

- Financial Incentives
 - Continuity
 - Coherence of parameters
 - Clear target
 - Quality criteria
 - Monitoring and evaluation
 - Financial resources
 - Simplicity
 - Flanking measures – alone not enough!!!



European Solar Thermal Markets

■ Financial Incentives

– Options in place

- Grants
 - Most of the countries (per sqm, per system)
- Tax reductions
 - France
- Loans at reduced rates
 - Germany (building renovation)



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European Solar Thermal Markets

■ Regulations

- Solar ordinances (Barcelona model)
- Energy performance of buildings
 - Efficiency and renewables

www.solarordinances.eu

■ Training

- Quality assurance – sustainability
- Efficiency and satisfaction
- Local jobs

www.qualicert-project.eu



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Ambitious Targets & Coherent Measures



Useful Links

- Renewables Directive
REPAP 2020
www.repap2020.eu
- Financial Incentives
www.estif.org/
- Regulations
www.solarordinances.eu
- Training
www.qualicert-project.eu



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