Market development in Europe

*Perspectives in view of the National Renewable Energy Action Plans*

World Sustainable Energy Days 2011
Wels, 3 March 2011
Xavier noyon- ESTIF Secretary General
European Solar Thermal Industry Federation

- Voice of the solar thermal industry, representing the sector at European level
- Actively promoting the use of solar thermal technology for renewable heating and cooling
- Coordinating efforts to promote solar thermal
- Providing support to the solar thermal sector
What has been the market development?
EU Solar Thermal market 1999-2009

Solar Thermal Market in EU27+
Total installed capacity

~3.0 GW\textsubscript{th} of new capacity in 2009
A consolidated industry

- 3 GW\text{th} of newly installed capacity in 2009
- 22 GW\text{th} of capacity in operation
- Turnover approx. 3,000 mEUR/year
- Over 35,000 full time jobs (most in small and medium size installation businesses)
Installed capacity in Europe (2009)

Operating Solar Thermal Capacity (per capita x 1000)

**UE-27 (and Switzerland)**

- **Austria**: 430.5 m²
- **Greece**: 361.8 m²
- **EU27+**: 62.5 m²
Market forecast for 2010 & 2011

Solar Thermal Market in Europe

Cumulative newly installed capacity for markets in the same size range

© ESTIF 2010
What are the perspectives?
The 20-20-20 EU policy by 2020

-20% -20% 100%

Greenhouse gas levels
Energy consumption
Renewables in energy mix

-20%

100%
Why renewable heat (RH)?

- Reduction of CO2 emissions
  - Climate change

- Energy Security
  - Now (ex: situation n Mahgreb and ME)
  - Future (scarcity of fossil fuels)

- Macro economic and financial impact
  - Rising and unpredictable energy costs
  - Reduction of energy imports (balance of payments)

- Renewable heat is an energy efficiency technology

- Industry policy (Europe, National, local)
  - Local value chain of decentralised energy production

- Individual investment (pay-back)
  - Increased building value
  - Energy poverty
Which policy mechanisms?

- Reduce energy consumption
- Reduce CO2 emissions
- Increase RES (renewable energy sources) in the energy mix

Which policy mechanisms?

- Important focus on residential sector
  - Reduce consumption
    - Energy efficiency measures
  - Increase the use of clean energy
    - Promote more RES in energy mix
  - Promote decentralised energy production
    - In the buildings or nearby

Energy Performance of Buildings Directive (recast)
...and Energy efficiency of heating appliances

Energy labelling

System (supplier/manufacturer)

Ecodesign

Lot 1

Space heating

Lot 2

Water heaters

Energy labelling

Space heating

Combi

“Installer label”
(distributor/dealer)

Water heaters
Which policy mechanisms?

- addressing more actors, institutions and market channels

- encourages energy efficiency through the development of a market for energy services

- delivery of energy efficiency programmes and measures to end users of energy and energy services

The Energy End-use Efficiency and Energy Services Directive (recast)
RES-D implementation

National Renewable Energy Action Plans (NREAPs)
The role of the NREAPs

- Setting out the pathway towards the 2020 national target for each Member State

- Critical for:
  - the necessary stability / predictability for investors
  - the Commission's ability to effectively enforce the Directive and keep Member States on track
  - transparency of RES developments in the EU
Overall targets planned in RNEAPs

Several countries above RES-D targets

Source: ECN, 2010

[Graph showing RES-D targets for various countries, with some countries exceeding their targets.]
RHC and ST targets planned in RNEAPs

**EU27 Gross Final Energy Consumption**

- 2005: 1,200,000 ktoe
- 2010: 1,200,000 ktoe
- 2015: 1,200,000 ktoe
- 2020: 1,200,000 ktoe

- Heating and Cooling
- Electricity and Transport

**Share of Solar Thermal in Renewable Heating and Cooling (EU 27)**

- 2005: 1.13%
- 2010: 3.54%
- 2015: 5.64%
- 2020: 5.64%

- Solar Thermal in Renewable H&C
- Renewable H&C
Les objectifs par pays pour le solaire thermique

http://www.ecn.nl/nreap - 1 February 2011

2005
2010
2015
2020

[ktoe]

Belgium
Bulgaria
Czech Republic
Denmark
Germany
Estonia
Ireland
Greece
Spain
France
Italy
Cyprus
Latvia
Lithuania
Luxembourg
Hungary
Malta
Netherlands
Austria
Poland
Portugal
Romania
Slovenia
Slovakia
Finland
Sweden
United Kingdom
European renewable mix in 2020

Renewable energy share in 2020: 20.7% (target 2020: 20%)

- Hydropower
- Geothermal electricity
- Solar electricity
- Tidal, wave and ocean energy
- Wind power
- Biomass electricity
- Geothermal heat
- Solar thermal
- Biomass heat
- Renewable energy from heat pumps
- Bioethanol / bio-ETBE
- Biodiesel
- Hydrogen from renewables
- Renewable electricity
- Other biofuels

http://www.ecn.nl/nreap - 1 February 2011 (European Union, EU-27)
Forecast of solar thermal growth (yearly rate)

Source: ECN, 2010
5th European Solar Thermal Energy Conference

Marseille, 20-21 October 2011
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