

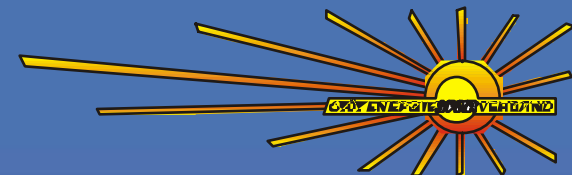
# Solar Thermal Upper Austria

Systemic market promotion in one of  
Europe's leading solar thermal regions

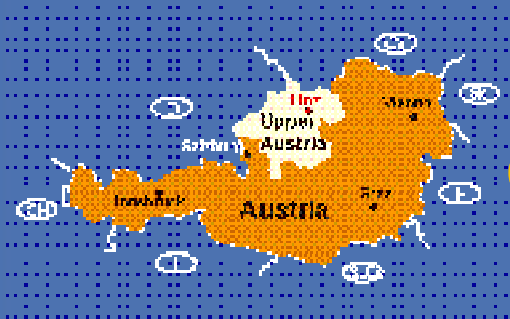
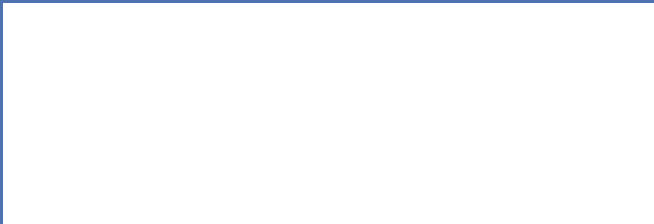
Christiane Egger

**O.Ö. Energiesparverband**

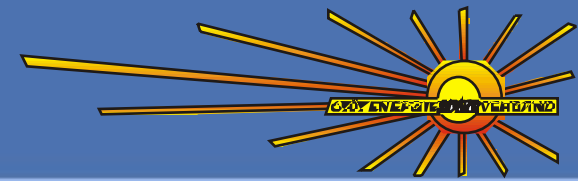
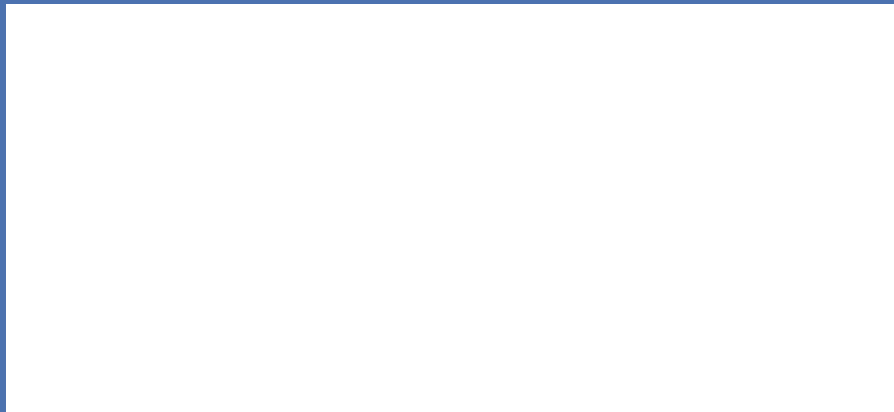
Landstraße 45  
A-4020 Linz, Austria  
T: +43-732-7720-14380  
[office@esv.or.at](mailto:office@esv.or.at)  
[www.esv.or.at](http://www.esv.or.at)



# Oberösterreich - Upper Austria



## O.Ö. Energiesparverband





# Energy Action Plan of Upper Austria

## 1994 - 1999

- 30 % renewable energy  
(14 % hydro, 14 % biomass, 2 % solar)
- energy consumption in new housing reduced by 30 %
- 15,000 jobs

## 2000 - 2010

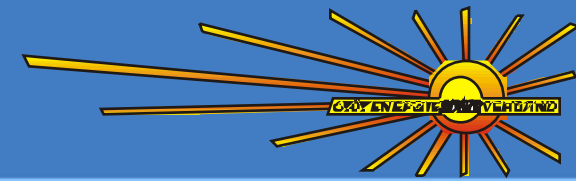
- double biomass & solar
- increase energy efficiency by 10 %

## Energy Efficiency Programme

- related to "Energy Service Directive"
- 1 % energy saving/year
- 1.5 % for the public sector

## Energy 2030

- reduction of heat demand by 39 %
- covering 100 % of space heating & electricity from renewables

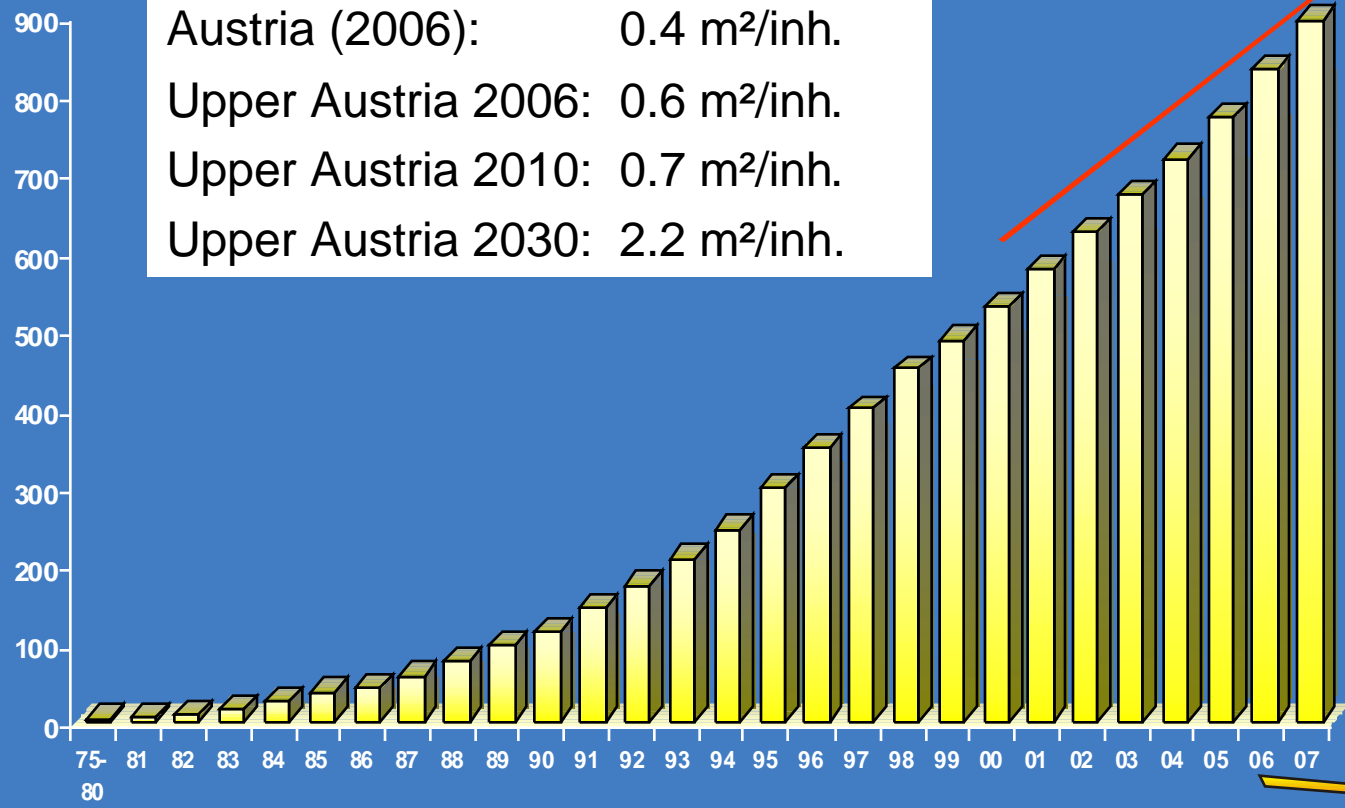




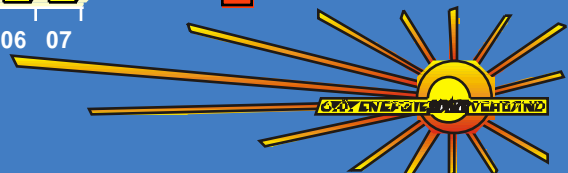
# Solar thermal in Upper Austria cumulated

EU27 (2006):	0.04 m <sup>2</sup> /inh.
Germany (2006):	0.1 m <sup>2</sup> /inh.
Austria (2006):	0.4 m <sup>2</sup> /inh.
Upper Austria 2006:	0.6 m <sup>2</sup> /inh.
Upper Austria 2010:	0.7 m <sup>2</sup> /inh.
Upper Austria 2030:	2.2 m <sup>2</sup> /inh.

in 1.000 m<sup>2</sup>

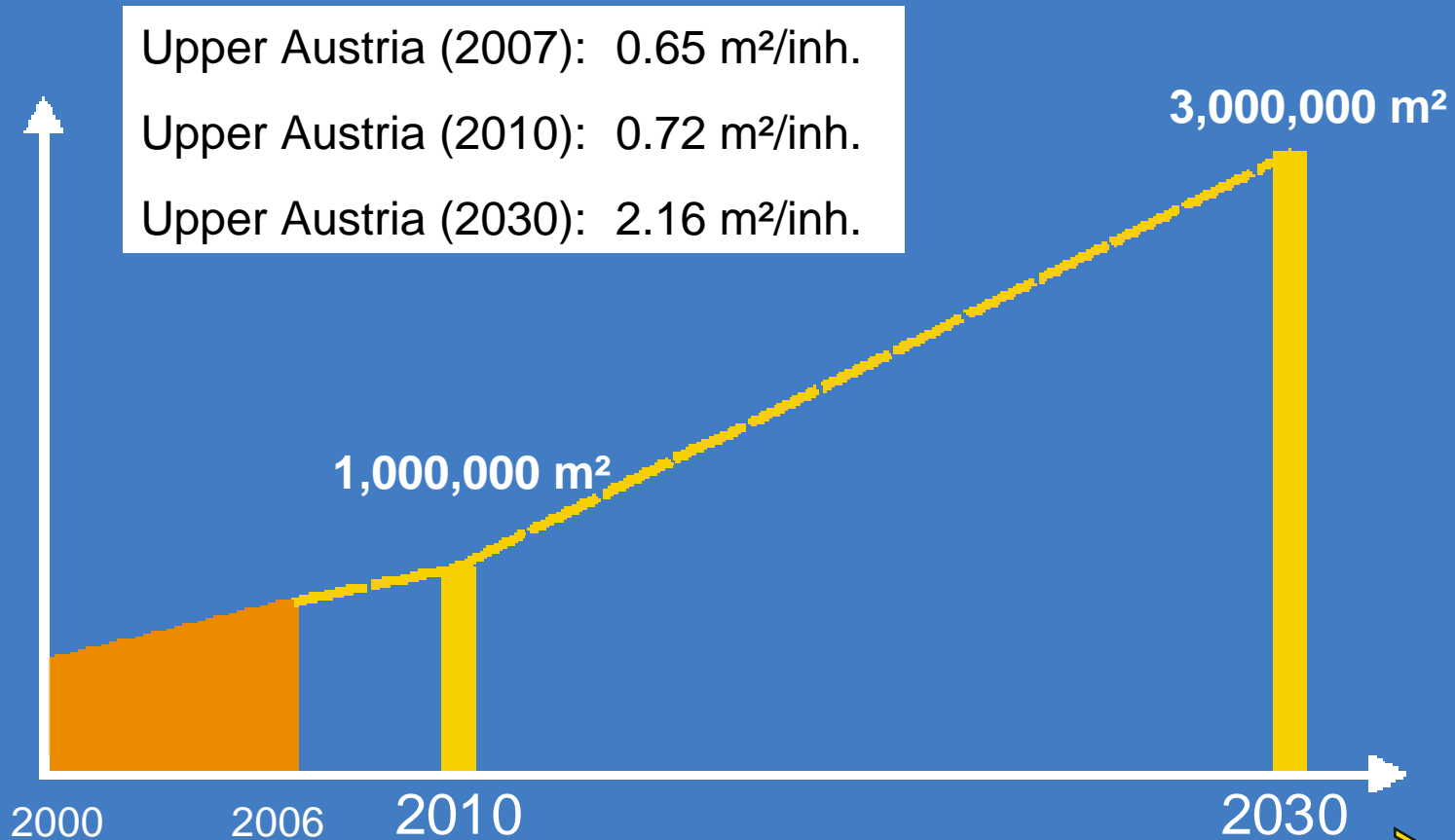


**target:  
doubling  
till 2010**



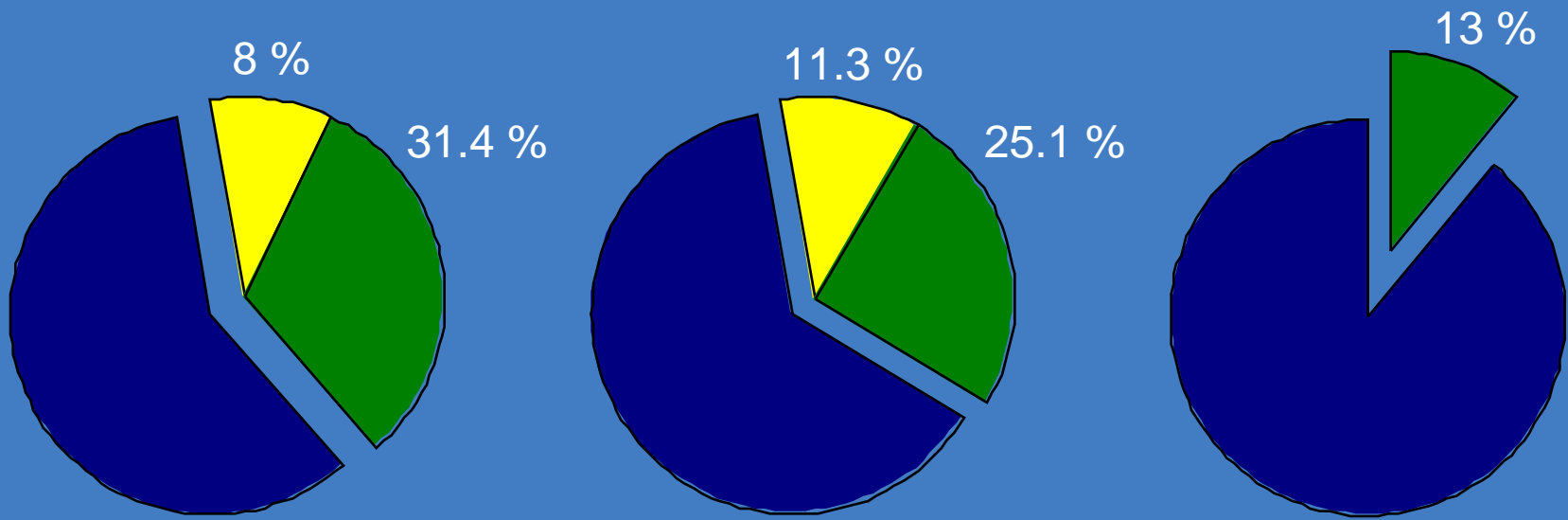


# Solar thermal in Upper Austria - planned





# Renewable Heating - Market Shares

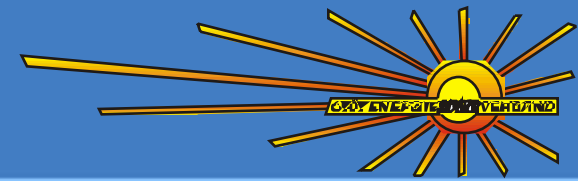


Upper Austria

Austria

EU15

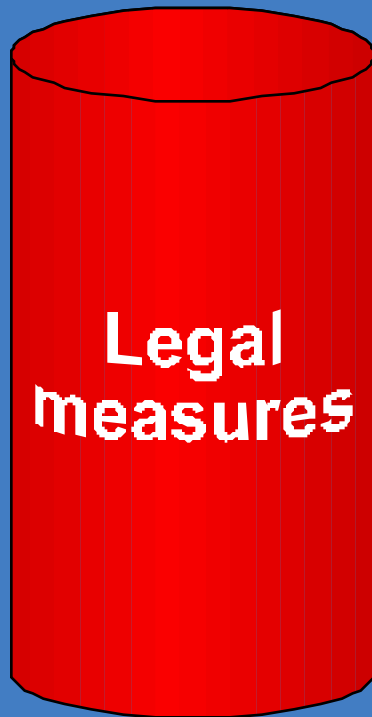
- district heating
- RES heating without district heating
- other





# Upper Austria's sustainable energy strategy

## 3 Pillars



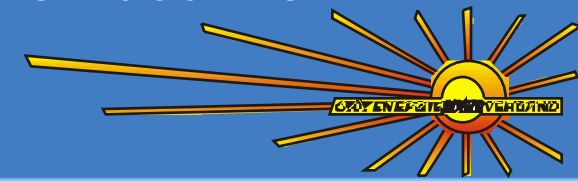
"stick"



"carrot"

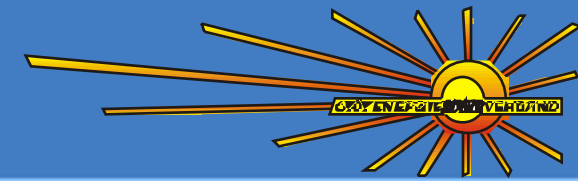
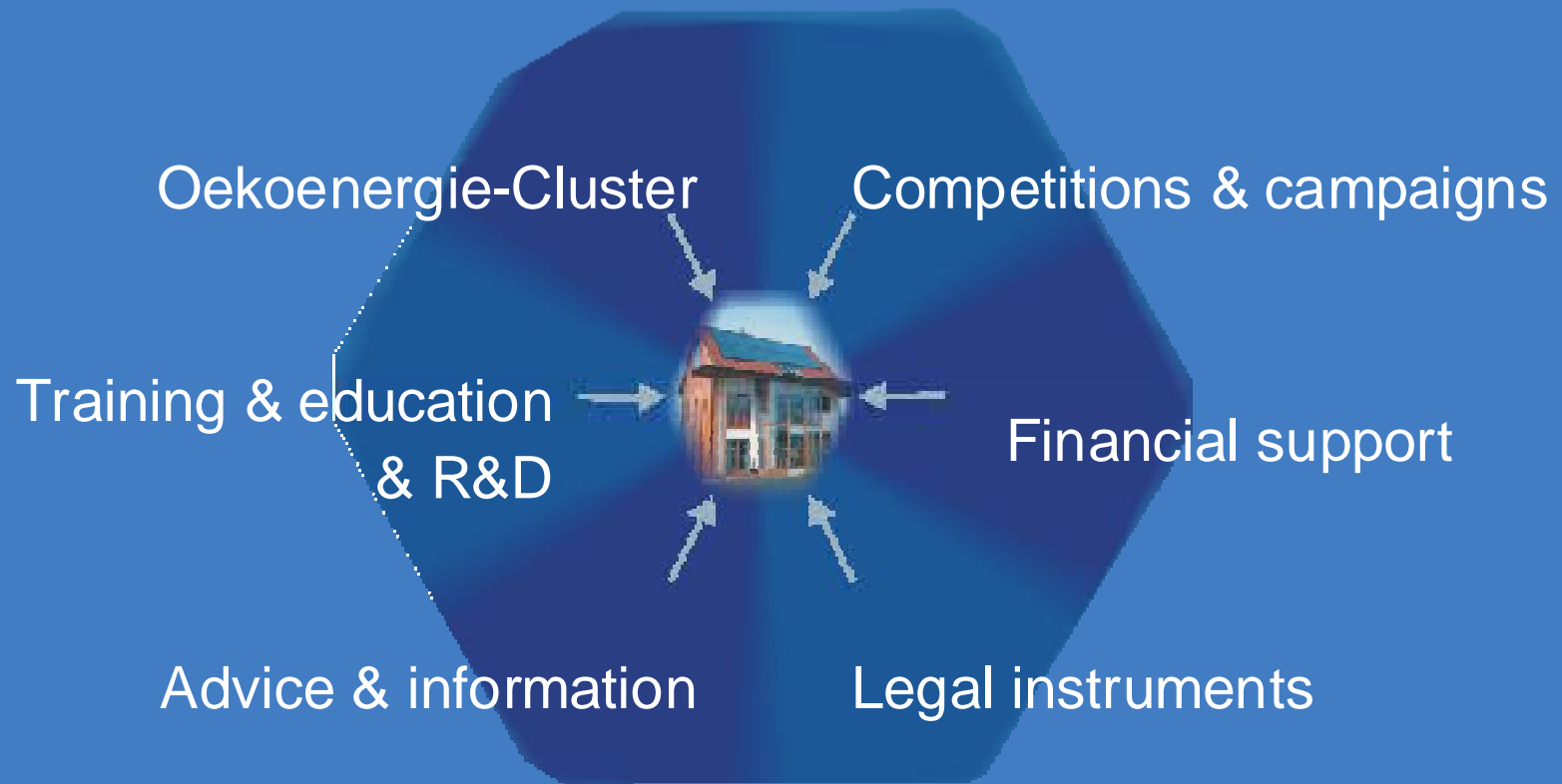


"tambourine"





## Solar Policies in Upper Austria







# Creating a market for solar energy

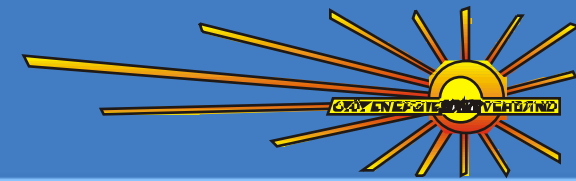
Objectives: 1,000,000 m<sup>2</sup> (2010) & 3,000,000 m<sup>2</sup> (2030)

## demand side

- awareness raising
- energy advice services
- financial support
- legal measures
- solar obligation
- Contracting

## supply side

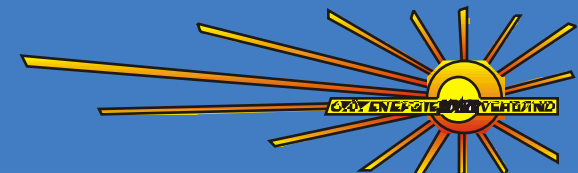
- Ökoenergie-Cluster
- training activities
- international co-operation
- regional R&D programme
- regional research institut (Austria Solar Innovation Center)





## Oekoenergie-Cluster Upper Austria

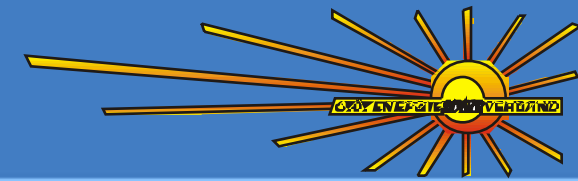
- Network of 145 renewable energy companies in Upper Austria (biomass, solar, wind, geothermal, hydro, buildings)
- [www.oec.at](http://www.oec.at) - also in English
- 4,000 employees, 1,450 MEuro turnover
- Examples: market research, development of promotion strategies, export tours, user manuals
- Examples:





## Supporting supply of solar products & services

- Oekoenergie-Cluster (OEC)
- R&D programme
- training seminars & targeted events
- Export
  - fairs and exhibitions
  - export tours
  - market information
  - site-visits in the region



# Solar campaigns

## Awareness raising initiative

- Bill boards
- Homepage
- Folders
- Direct mailings

## Info campaign for installers

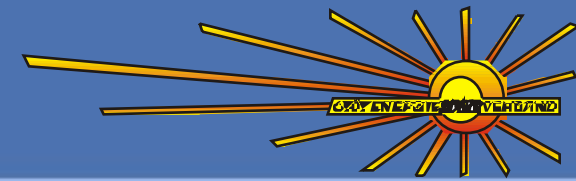
- Round table
- Survey
- Targeted mailing
- Events & training

## TPF promotion campaign

- Meeting with ESCOs
- Mailings
- Financial support

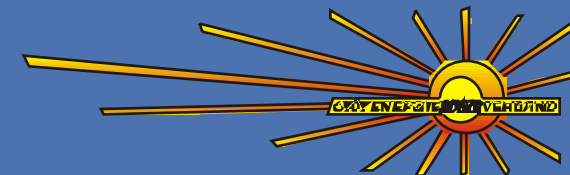
## Solar cooling initiative

- Information brochure
- Training & information event
- Demonstration projects



# Leading by example: Solar installations in regional buildings

- 26 installations in operation (1 165 m<sup>2</sup> )
- 2 installations under construction (220 m<sup>2</sup>)
- 4 installations in planning (> 150 m<sup>2</sup>)





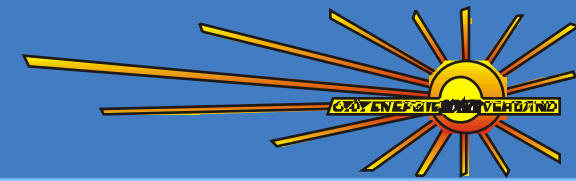
## "Solar obligation" in Upper Austria (1)

### Public buildings

- priority (=obligation) for solar and other renewables, since 2002 (legal obligation & requirement for funding for municipalities)

### Residential buildings

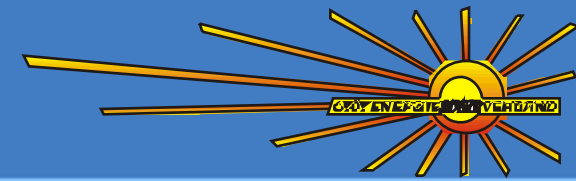
- for all new residential buildings (participating in the regional housing programme; covering > 90 %)
- at least 4 m<sup>2</sup> / home (one family homes)  
at least 2.5 m<sup>2</sup> / flat (apartment buildings)





## "Solar obligation" in Upper Austria (2)

- exceptions for residential buildings:
  - district heating: fuelled by biomass, process or waste heat or "deep" geothermal and in operation all year
  - climate reasons: on 21 April less than 6 hours of sunshine due to the location in a valley, not considered are weather and local shading by another building or trees (only in the high mountain areas)
  - economic reason: if an ideally positioned collector produces less than 200 kWh/m<sup>2</sup> (rather unrealistic, only if "next to a cathedral"), normally min. 360 kWh/m<sup>2</sup>





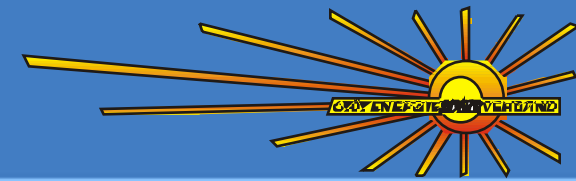
## Financial support for residential solar thermal in Upper Austria (1)

### Single-family homes

- 1100 Euro + 100 Euro/m<sup>2</sup> (140 Euro/m<sup>2</sup> for vacuum collectors)
- max. 3800 Euro (for new installations; for renovation or enlargement 100 Euro/m<sup>2</sup> resp. 140 Euro/m<sup>2</sup>)

### Multi-family homes & “social residences”

- 200 Euro/m<sup>2</sup> (min. 2.5 m<sup>2</sup>/apartment)
- additionally increased housing subsidy
- if contracting, additionally contracting subsidy



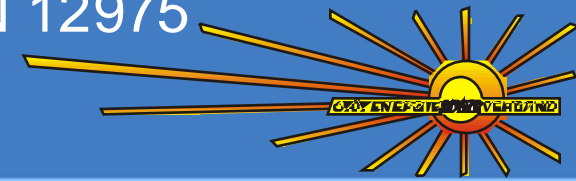




## Financial support for residential solar thermal in Upper Austria (2)

### requirements

- obligatory heat meters (only "quality" meters which - as a minimum - measure the volumetric flow rate<sup>1</sup> (Volumenstrom) and the temperature before and after the heat exchanger)
- "solar keymark" for the collector:
  - multi-family from March 2008
  - single-family from January 2009 (otherwise the subsidy is reduced by 25 %), but must be tested at least acc. to EN 12975



# World Sustainable Energy Days 2009

[www.wsed.at](http://www.wsed.at)

**25. - 27. 2. 2009**

Wels / Austria

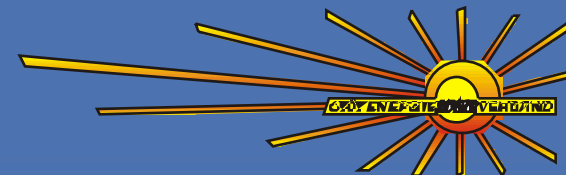
**Call for Papers:  
1.10.2008**

- European Pellets Conference
- Energy Efficiency Watch
- Efficient Cooling of Buildings
- Energiesparmesse





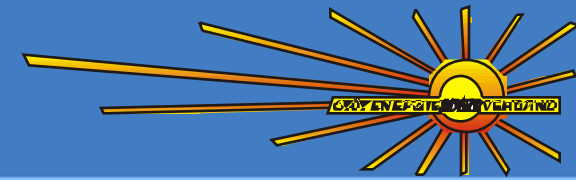
The objective for Upper Austria 2030:  
3 million m<sup>2</sup> solar collectors





## Solar Obligations

- will only be successful as a part of a “policy package”, including other legal as well as financial and information/training/awareness instruments
- straight-forward, clear requirements, as few exceptions as possible (as a means to reduce non-compliance)
- quality is key
- public awareness is key (to create an understanding that this is not another awful bureaucratic burden)
- information & training for suppliers and users are key
- leading by example – public buildings!

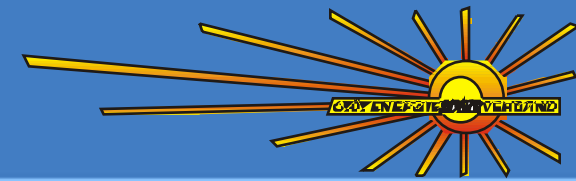






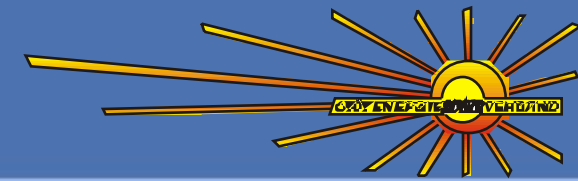
## Specific solar initiatives Examples

- Info campaign for installers
  - round table
  - survey
  - targeted mailing
  - events & trainings
- TPF promotion campaign
  - meetings with ESCOs
  - mailings
  - financial support
- Solar cooling



# Example: Solar promotion for hotels & restaurants

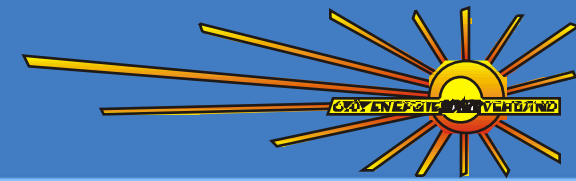
- "sector concept" (Branchenkonzept)
  - study & analysis of "typical buildings"
- info folders
  - checklists
  - best practice examples
- direct mailing to 5582 companies
- energy advice to 95 companies
- financial support





## Campaign "solar cooling"

- Information event on energy efficient & solar cooling
  - 8 May 2008, > 300 participants
- Information brochure
- Training "cooling advisers"
  - efficient & solar cooling technologies
  - 2 days incl. site visit
  - 2-3 April 08
- Demonstration projects







## Example: Multi-family buildings

- Solar guide (planning manual)
- Training seminars
- Best practice examples
  - Solar city Linz
  - Lenaupark
- Site visits "Ökoenergie on tour"
- Financial support

