



## EVENT DESCRIPTION

Project partner: ESV

### European Training Seminar Solar Process Heat

Official Side-Event of  **inter solar**  
connecting solar business | EUROPE

**Date & location:** 9 June 2011, Munich/Germany

**Organiser:** O.Ö. Energiesparverband & Fraunhofer ISE

**Number of Participants:** 30

#### Summary

The training seminar "Solar Process Heat" was held on 9 June 2011 in Munich as official side event of the trade fair and exhibition Intersolar Europe. 30 participants, representing technical experts from solar and industrial companies, specialised planners and energy consultants and other persons with a business interest in this field, actively participated.

The training team consisted of solar thermal experts from the So-Pro project consortium, a representative of the Greek Solar Industry Association as well as one solar thermal company.

The presentations included information on:

- information on selected industrial processes which require low temperature heat
- an interactive training session on different planning approaches
- discussion of different system concepts and collector types
- case studies including financing aspects and "solar contracting" examples

The training seminar brought together know-how on solar process heat from all over Europe and offered interaction with solar thermal experts on details of planning and implementing solar process heat installations.

The feed back received was very good and the participants actively contributed.

As the training seminar was official side event of the important fair "Intersolar", the world's largest exhibition for the solar industry, with 1,884 international exhibitors and more than 72,000 trade visitors (2010), the visibility of the training seminar was very much increased. South European countries were involved both as speakers (one speaker from Italy and one speaker from Greece) and as participants (participants from Italy and even from non-European countries like Brazil).

### **Objective & main programme points**

The aim of the conference was to disseminate the project findings of the So-Pro project to a wider target audience in Europe. The conference was opened by an overview of the So-Pro projects and the findings so far. The introduction also included information on financing options, such as contracting. An overview of selected industrial processes which require low temperature heat was followed by a training session on how to design a solar process heat installation. The seminar programme was continued by the discussion of concrete examples of solar process heat installations (Greece, Spain, Germany, Italy).

During the coffee and lunch breaks the presentations were discussed in detail and participants very much used the opportunity to get into contact with the speakers.

The training seminar was evaluated by the participants with using a questionnaire. The feedback was very positive: all participants considered the seminar as good, over 40 % even excellent/very good.

The main motivation to participate in the seminar was to learn more about the specific business field of solar process heat and to get in contact with other professionals. The practical examples and the case study with the exercise session were liked best. For further improvement, a deeper insight in financial dimensions of solar process heat and some site visits were suggested.

## Conclusions & lessons learnt

The seminar programme was very well received by the participants, the combination of presentations with a technology focus (technology overview, planning details) and case studies (including details on the implemented solar thermal concept) turned out to be of great interest for the participants. The practical benefits of the So-Pro checklist and planning guideline was highlighted by speakers and participants.

The most important technical conclusions from the presentations, which were highlighted by the speakers, included the following:

- potential for the use of solar thermal energy for industrial processes is very high (several 100 GW<sub>th</sub>);
- realisation of solar process heat plants and further R&D in this field should happen in parallel;
- proper design of the solar thermal collectors is important: dimensioning -> no waste heat during summer months, inclination, type of collector depending on fields of use, integration of solar thermal system at the deepest temperature levels, make sure that solar system and conventional system go together well – proper integration of solar thermal system, continuous maintenance of the system, remote control for larger installations;
- although the focus is on low temperature applications, the option of high temperature collectors was discussed. Two high performance collector technologies are already available which could broaden the field of application of solar energy to solar process heat and to many more fields of application;
- for economic reasons, a subsidy programme is needed to make it economically attractive;

## ANNEX

The following documents are included in the annex:

- programme
- pictures

### Programme

- 09.00 Registration – get-together
- 09.30 Introduction & welcome  
The SO-PRO project  
*Christiane Egger, Deputy Manager, O.Ö. Energiesparverband, Austria*
- 10.20 Selected industrial processes which require low temperature heat  
*Vlasta Krmelj, Energap, Slovenia*
- 11.00 Coffee break
- 11.30 Designing solar thermal systems for selected industrial applications  
*Stefan Hess, Fraunhofer ISE, Germany*
- 13.10 Lunch break
- 14.30 Greek experiences with solar thermal process heat installations  
*Michaelis Karagiorgas, ASPETE University of Athens, Greece*
- 15.00 Presentation of case studies  
*Spain: Francisco Puente Salve, ESCAN*  
*Germany: Klaus Kottsieper, GERTEC*
- 16.10 Example: High temperature collectors  
*Francesco Orioli, Soltigua, Italy*
- 16.40 Discussion
- 17.30 End of the training seminar

# Pictures

