



## Solar Process Heat

### The first newsletter of the Intelligent Energy Europe Project So-Pro

#### Background

While solar heat for domestic and service applications has increasing market shares across Europe, solar process heat is very much in its infancy. The potential is enormous: about 30% of the total industrial heat demand is at temperature levels below 100°C which can be provided with commercially available solar thermal collectors. However, only about 70 installations in Europe were identified by the IEA Task 33 Solar Heat for Industrial Processes.

#### The IEE-project "Solar Process Heat" (SO-PRO)

The IEE-project "Solar Process Heat" (SO-PRO) aims at triggering the starting-up of markets for solar process heat in 6 European regions. The project activities include, for example, targeted market development activities, training of professionals, information for industrial decision makers, 12 pilot projects and the development of new services for solar contracting.

The project takes a strategic approach by:

- implementing comprehensive regional campaigns in 6 European regions
- by carrying out a broad European dissemination, including an international training seminar, to ensure the impact of the project on European level
- by bringing together know-how in industrial processes, in solar thermal and in regional market development and by involving the main target groups - industrial and solar companies.

The project is coordinated by the O.Oe. Energiesparverband, the energy agency of Upper Austria, the following partners from 6 European regions and 2 scientific partners will implement the project:

ESCAN (Spain/Castillias and Madrid regions), Energy Centre České Budějovice (Czech Republic/South Bohemia), GERTEC (Germany/North-Rhine Westphalia), Sächsische Energieagentur (Germany/Saxony), Energy Agency of Podravje (Slovenia/Maribor region), Fraunhofer Institute for Solar Energy Systems.

For further information, please visit the project website [www.solar-process-heat.eu](http://www.solar-process-heat.eu).

If you would like to receive the following newsletter and other information from this project, please register [here](#).

We would also be pleased to receive your suggestions and feedback at [this website](#) or to [office@esv.or.at](mailto:office@esv.or.at).

## **Energy screenings of industrial companies**

One of the first project activities is an energy screening of 90 industrial companies. The aim is to analyse industrial companies which use process heat below 100°C and to learn about application possibilities for solar process heat. These screenings are also the basis of the selection of "priority fields of applications", industrial processes which are sufficiently frequent in the participating regions and which are suitable for the integration of solar thermal installation.

The results of the screenings show that the main constraints are the economic feasibility of such installations and the lack of experiences (best practices) all over Europe. Limiting factors include very low prices for fossil fuels found in many industrial companies (compared to other users) and the availability of waste heat from other process steps. The most interesting opportunities for solar process heat identified include applications with low temperature levels (below 50°C), no demand interruptions in summer (e.g. due to longer holiday closing period) and where the solar installations can be integrated from the beginning in the planning of the buildings and the energy systems.

For further project activities, the following fields of applications for solar process heat were considered:

- cleaning and washing
- heating of baths/vessels
- drying

## **Case study "Solar Process Heat"**

### **Solar process heat installation in a concrete factory in Upper Austria**

In its new company building in Upper Austria, an industrial company produces pre-fabricated concrete elements for walls and ceilings. The decision was taken to install a solar process heat system instead of a conventional oil system. The installation is in operation since December 2009 and consists of 315 m<sup>2</sup> large solar thermal collector plant and 3 buffer storages (12,000 liter each). The total heat demand to be covered (production and space heating) is about 530,000 kWh/a. In addition to the solar thermal plant, a 200 kW wood chip boiler provides heat. About 30% of the heat needed for the production and for heating the production facility comes from the solar thermal system.

The installation of a wood chip and a solar thermal system could be done economically: compared to heat provision with oil, 25,000 Euro annually can be saved. The benefits for the environment are also substantial: 422 t CO<sub>2</sub> emissions annually are saved. The investment, compared to an oil heating system, was about 135,000 Euro higher of which were partly covered by a public programme.

## **Solar Thermal Conference Wels, 4 - 5 March 2010, Wels/Austria**

The Solar Thermal Conference Wels is organised by the O.Oe. Energiesparverband, from 4 - 5 March 2010 in Wels/Austria. [The conference programme](#), which includes 18 speakers from 12 countries, is available at [www.wsed.at](http://www.wsed.at).

The Solar Thermal Conference Wels will present innovative technologies and solutions, such as solar cooling, solar process heat or innovative approaches to thermal storage. It will also discuss market trends on different Europe markets and beyond as well as innovative financing solutions and policies and programmes promoting solar thermal.

The Solar Thermal Conference Wels takes place in parallel to the "Energiesparmesse", a trade show dedicated to renewable energy sources and energy efficiency with nearly 100,000 visitors every year and nearly 100 exhibitors showing solar thermal related products.

The location of the conference is very well chosen: with more than 700 m<sup>2</sup> per 1000 inhabitants (more than 1 mio m<sup>2</sup> in total), Upper Austria is a leading solar thermal region worldwide!

Additionally, the [World Sustainable Energy Days](#) offer a number of other high-profile events, including the "European Pellet Conference" ([programme](#)), the conference "Building Renovation - Towards Low Energy Consumption" ([programme](#)) as well as a "Poster Presentation". In 2009, the annual World Sustainable Energy Days conference attracted more than 850 decision makers and experts from 53 countries.

Simultaneous interpretation will be provided into English, German and Italian.

The conference fee is 120 Euro for the Solar Thermal Conference Wels and 275 Euro for all conferences of the World Sustainable Energy Days (all plus 10 % VAT). Further information on conference fees is available on the conference website [www.wsed.at](http://www.wsed.at) -> Registration & Info.

For more information please visit the conference website [www.wsed.at](http://www.wsed.at) or contact O.Ö. Energiesparverband, Landstrasse 45, 4020 Linz/Austria, T: +43-732-7720-14386, [office@esv.or.at](mailto:office@esv.or.at), [www.esv.or.at](http://www.esv.or.at)

More information: [www.solar-process-heat.eu](http://www.solar-process-heat.eu)

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