Project Fact Sheet

Solar Process Heat (SO-PRO)

Main Information

	Key Action:	CIP-IEE-PROMO-P
	Project coordinator	O.Ö. Energiesparverband, Upper Austria office@esv.or.at, www.esv.or.at +43-732-7720-14380
	Contact person name:	Christiane EGGER
	Contact person phone:	+43-732-7720-14382
	Contact person email:	Christiane.egger@esv.or.at
	Project's Partners	ESV - O.Ö. Energiesparverband, Austria/Upper Austria ESCAN, Spain/Regions of Castillas y Madrid ECCB - Energy Centre České Budějovice, Czech Republic/South Bohemia GERTEC, Germany/North-Rhine Westphalia SAENA - Sächsische Energieagentur, Germany/Saxony ENERGAP - Energy Agency of Podravje, Slovenia/Maribor region ISE - Fraunhofer Institute for Solar Energy Systems
	Project's website:	www.solar-process-heat.eu
	Benefits:	The project started a market development process on solar process heat in 6 European regions which supports the EU renewable energy targets and the competitiveness of the European industry
	Keywords:	Solar thermal, process heat, industry
	Duration:	01/06/2009 – 30/09/2011
	Budget:	903,545 Euro (EU contribution 75%)
	Contract number:	IEE/08/425/SI2.528532

Summary

In principle, there is an enormous potential for using solar thermal systems in industry: 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, the market in Europe and globally is very much in its infancy - a few hundred installations exist.

The main objective of the SO-PRO project was to trigger the starting up of markets for low temperature solar process heat in 6 European regions: Upper Austria, Regions of Castillas y Madrid/Spain, South Bohemia/Czech Republic, North-Rhine Westphalia and Saxony/Germany, Podravje region/Slovenia.

The following approach was used:

- bringing together know-how from industrial processes, solar thermal and regional market development
- trans-sectoral approach (not limited to specific industrial sectors/branches)
- carrying out targeted awareness raising and information activities
- identifying and supporting pilot projects

Project's results (max. 500 characters per bulletpoint)

Result 1	• a learning and market development process was started in the 6 project regions • stakeholders in the project regions met for the first time to discuss solar process heat • there are commitments to continue the training courses in all project regions • the tools developed within the project were found to be very useful by the stakeholders • project partners will continue the cooperation, the first step is establishing an informal network "Solar Process Heat Network Europe"
Result 2	Quantitative results include: • 173 persons trained • 1,684 participants in project events • 9 pilot project triggered • 18 companies in the project regions now present solar process heat on their website as a business field • 168 press articles • targeted mailings to more than 7,500 stakeholders • 21 professionally designed publications in 5 languages
Result 3	Tools to support market development of solar process heat: • self-assessment checklists to make a first preliminary analysis whether solar process heat could be an option for a company with "K.O." and "OK" criteria • planning guidelines "Solar Process Heat Generation: Guide to Solar Thermal System Design for Selected Industrial Processes" (processes included: heating of hot water for washing or cleaning, heating of make-up water for steam networks, heating of industrial baths or vessels, convective drying with hot air) • tools available in English, German, Spanish, Czech, Slovene

Result 4	Very good response to the project from stakeholders across Europe • well-attended international events organised within the So-Pro project • successful co-operation with ESTIF and Global Solar Thermal, articles were placed in a number of important international magazines • project partners were invited to present So-Pro at a number of major international conferences (ESTEC 2011 conference, the Intersolar 2011 conference and the Solar World Congress 2011). • So-Pro results will actively be used in the new IEA Task 49 "Solar Process Heat for Production and Advanced Applications".

Lessons learnt

Lesson 1	Economic viability: The main challenge in the implementation of solar process heat projects lies in the economic viability. It is more likely if: • low temperature process heat is required during the warmer months, best below 50°C (except if for pre-heating water) • no waste heat from other processes can be used • heating oil is the main fuel • dedicated funding schemes are available
Lesson 2	Knowledge and information levels: • in all regions, the level of knowledge about solar process across the value chain was even lower than expected • a double approach was necessary: general awareness raising to spark a first interest in the subject as well as specific information tailored to the needs of the target groups (training, technical advice, funding information etc.) • continuous awareness raising activities and targeted information are needed • it is important to continue to pin-point applications where solar process heat is economically feasible today
Lesson 3	Policy support Substantial policy support is needed to allow solar process heat to deliver its full potential in economic and environmental terms, most important instruments are: • including solar process heat in national and regional renewable action plans and policies • R & D support • support to dissemination on European/national/regional levels • dedicated financial support on national and regional levels through well-designed programmes, possibly also from existing programmes that support energy efficiency measures in industry

Last updated: 28.11.2011