

# NEWSLETTER No 1

September 2004

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### PROJECT DESCRIPTION

Development of the next generation of solar thermal systems (SDHW and space heating) and their introduction to the market

### TIME SCHEDULE

Project started July 1<sup>st</sup>, 2004  
Duration: 36 months

### INTERNET

[www.swt-technologie.de/html/negst.html](http://www.swt-technologie.de/html/negst.html)

### DESCRIPTION OF WORK PACKAGES

The project is subdivided into 6 work packages:

- WP 1 - Next generation of systems
- WP 2 - Standardised system concepts
- WP 3 - Integration into buildings
- WP 4 - Towards the next generation of standards
- WP 5 - Advanced applications
- WP 6 - Project management

### CANDIDATS FOR NEW GENERATION OF SYSTEMS WANTED

concerning WP 1 – next generation of systems. Unique opportunity to present and develop your next generation of systems.

### SURVEY

concerning WP 2 – standardised system concepts. A survey of the practice of designing, planning, installing and marketing larger solar systems in different European countries will be performed in autumn 2004.

### CALL FOR INPUT FROM INDUSTRY

concerning WP 4 – towards the next generation of standards. Call for inputs from industry and others on specific products, systems, applications, topics, for which new or updated standards are needed

### PARTICIPANTS

18 different organisations out of 14 different European countries

## PROJECT DESCRIPTION

The overall objective of this project is to introduce a framework for research into more cost-effective solar thermal systems, particularly for domestic hot water preparation and / or space heating, to the market in order to contribute to the European Union's Action Plans with regard to the reduction of CO<sub>2</sub> emissions and the cost effective supply of renewable energies. In order to achieve this goal the project provides a framework for the development of the next generation of solar thermal systems and their introduction to the market.

The main instruments and deliverables of this project will be

- A network for the co-ordination of the research and innovation activities for the development of a new generation of solar thermal systems
- Accompanying measures intended to introduce a new generation of solar thermal systems for domestic hot water preparation and / or space heating to the markets. These measures are focused on the
  - promotion of standardised system concepts
  - integration of solar thermal systems into building technology
  - methods for rating, standardisation and testing of the next generation of systems
  - forming a platform for the work on advanced applications such as solar cooling and desalination

The consortium consists of leading solar thermal experts from research and test institutes as well as industry participants from several European countries. The project activities will be closely linked to the work of the IEA SH&C Task 32 (Advanced storage concepts for solar thermal systems in low energy buildings) and with regard to standardisation work to CEN TC 312 (Thermal solar systems and components).

## TIME SCHEDULE

- **Starting date:** 01.07.2004
- **Duration** of project: 36 months

## INTERNET

<http://www.swt-technologie.de/html/negst.html>

## DESCRIPTION OF WORK PACKAGES

### WP 1 - Next generation of systems

Development of a new generation of solar thermal systems and their introduction to the market.

### WP 2 - Standardised system concepts

This work package aims at standardised concepts for larger solar thermal systems, i.e. hot water supply for multifamily houses and other buildings with a large hot water demand. Furthermore, solar cooling systems for larger buildings, such as office buildings and multi family houses will be considered.

### WP 3 - Integration in buildings

Pre-normative work on uniform methodologies to fully integrate solar heating systems in the new directive on Energy Performance of Buildings 2002/91/CE. Disseminate efficient methods and innovative ways of integrating solar thermal with focus on the architectural and aesthetic points of view in new and existing buildings.

### WP 4 - Towards the next generation of standards

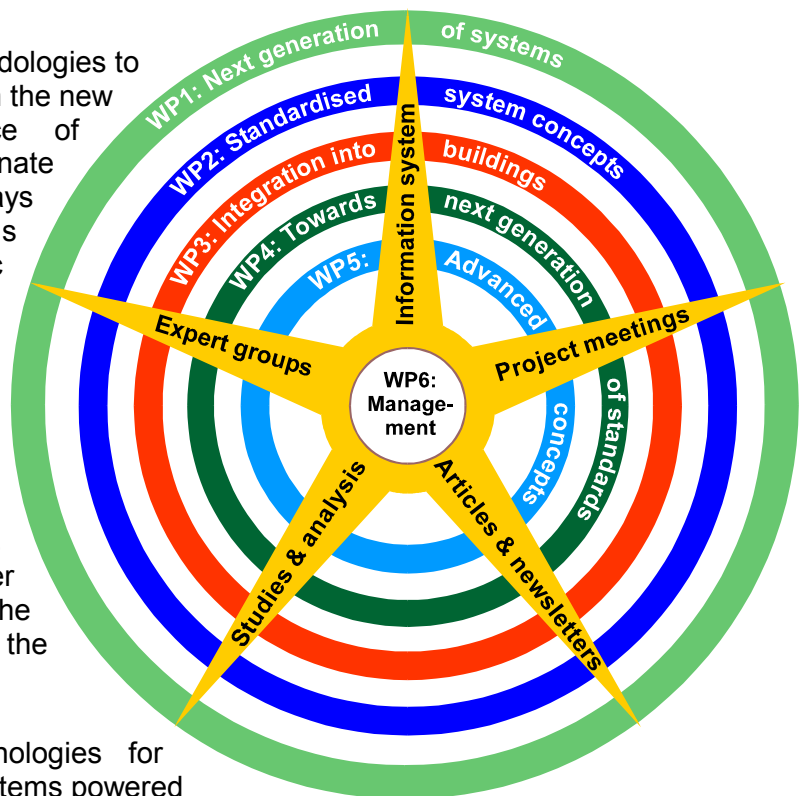
The objective is to complete pre-normative work for a next generation of solar thermal systems and components. These new standards are needed to help new and better products - which are not covered by the existing standards - to penetrate the market as soon as possible.

### WP 5 - Advanced applications

Identify the most promising technologies for seawater desalination and cooling systems powered by solar thermal energy at low to medium temperatures.

### WP 6 - Project Management and dissemination of project results

Management and Co-ordination of the whole project in order to achieve the contractual obligations and expected results. Dissemination of results achieved within the project.



## CANDIDATES FOR NEW GENERATION OF SYSTEMS WANTED

### WP 1 – NEXT GENERATION OF SYSTEMS

Industry and researchers shall join forces to accelerate the development of thermal solar system technology. Enterprises active in the field of solar thermal system design may profit from gathered European expertise in system development, testing and evaluation. NEGST offers a unique opportunity to present and develop your next generation of systems. The steps planned in WP1 to design, build and evaluate the next generation of systems are:

1. identify promising system concepts for a next generation of systems
2. theoretically evaluate the candidates presented in step one
3. advise industry to design and build the systems
4. field evaluate system operation

If you are a designer of active solar thermal systems you are now asked to suggest your view of the next generation of systems. Contact your preferred participant or SPF (see last page of this newsletter) and mention if confidentiality is desired. This is a unique opportunity to link up with the experts who will help you evaluate your ideas and develop them into a product.

## SURVEY

### WP 2 – STANDARDISED SYSTEM CONCEPTS

NEGST WP2 “ Standardised System Concepts” has the goal to overcome the still existing barriers that hinder the dissemination of larger solar systems to become standard in hot water supply (and heating) for multi family houses and other buildings with a large hot water demand.

First step in this work package: By means of a questionnaire a survey of the practice of designing, planning, installing and marketing larger solar systems in different European countries will be performed in autumn 2004. This questionnaire will be sent out by end of the year 2004. Main target groups: Building industry, Solar manufacturers, Planners & Installers.

Topics to be dealt within this questionnaire: Costs, district heating, decentralisation, subsidies, quality of products and installation, training of installers, building laws, financing, yields, performance, monitoring devices, monitoring data, hydraulic schemes, dimensioning,....

Besides further steps in this work package, this survey will already contribute to the final result which is a comprehensive but very practical guideline for realisation of large solar systems covering all aspects from financing to technical issues, design, installation, maintenance and marketing. To make them well known series of workshops will be performed to intensively distribute them amongst the target groups.

## CALL FOR INPUT FROM INDUSTRY

### WP 4 - TOWARDS THE NEXT GENERATION OF STANDARDS

As solar thermal components, systems and applications are developing, new standards are and will be needed. Standards will always – by nature – be developed with a certain time delay compared with developments of products and systems. This delay is a barrier for the new products to enter the market, as no testing and certification is possible or existing standards do not express the benefits of the new products. The mission of this work is to minimize this time delay in order to bring the new and better products on the market as fast as possible.

**The NEGST WP4 group has identified some areas where new/updated standards are/will be needed:**

- advanced/new types of collectors
- advanced/new types of stores
- advanced/new types of controllers
- combisystems (DHW/SH)
- solar cooling
- combination of solar thermal and heat pump technology
- solar desalination
- fluids
- LCA (environmental Life Cycle Assessment)
- conversion from m<sup>2</sup> to power and energy (for use in market statistics)
- building integration

This list is not the final or complete list - decision on the specific topics to be treated in the project will be taken during the first half year of the project (before the end of 2004), and then before the end of 2005 decision will be taken on the specific proposals to be passed on to CEN TC312.

The group now **calls for inputs from industry and others** on specific products, systems, applications, topics, etc., for which new or updated standards are needed. **Please give your input to Jan Erik Nielsen, ESTIF by mail ([jen@solarkey.dk](mailto:jen@solarkey.dk)) as soon as possible.**

More information on the NEGST (New Generation of Solar Thermal Systems) project including a more detailed description of the work package 4 at:

<http://www.swt-technologie.de/html/negst.html>

## PROJECT PARTICIPANTS

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