SOLARGE

Enlarging Solar Thermal Systems in Multi-Family-Houses, Hotels, Public and Social Buildings in Europe

Issue 1 June 2006

NEWSLETTER

Think Big: Dedicated to Large Solar Thermal Systems

No doubt: European solar thermal markets have seen impressive growth recently, even more so due to the volatility of oil and gas prices. Industry federations such as ESTIF estimate the growth rates of 2006 to be 20 % or more. However, one segment of the solar market has not yet been affected by this upswing: collective systems larger than 30 square metres.

Solar thermal systems on multi-family, hotel, public and social buildings are often no more than demonstration projects. The EU project SOLARGE was explicitly created to get active in this field. The main tools are non-technological activities such as communication, information, training and lobbying. SOLARGE comprises of eleven partners from eight European countries. "A main result of SOLARGE so far has been the publication of a market report containing analysis of barriers, policies and development of collective solar thermal systems (CSTS) in all involved countries" explains the coordinator of this work package, Gerhard Stryi-Hipp, secretary general of the German solar industry association BSW. "This has given us a much better insight into the difficulties and opportunities of CSTS. Although the framework is most diverse and still can be improved in most countries, one thing is very apparent: the lack of awareness and information hinders the market more than anything else." SOLARGE is dedicated to overcoming these communicative barriers. Steps taken include a Good Practice database, training courses, campaigning and policy recommendation. SOLARGE is funded by the European Commission's *Intelligent Energy – Europe* programme and will run until December 2007. Partners come from Denmark, France, Germany, Italy, Netherlands, Slovenia and Spain. SOLARGE is coordinated by target GmbH in Hannover, Germany.

Contents

Intelligent Energy Europe

Treasure Trove: The Good Practice Database

Positive practical experiences from existing projects are the best way to encourage new ones. Therefore from its beginning SOLARGE had the ambition to create the best online database on large-scale solar thermal systems. Every project partner agreed on researching existing examples and collecting data according to a standardised questionnaire. Special focus was on non technological data such as the impulse for the project, financing and support. After overcoming primary difficulties, the SOLARGE database is now accessible.

Right from the start, there was no doubt that SOLARGE was to communicate the best possible examples of existing collective solar systems in its participating countries. Since most project partners did not have a data stock including information on financing and quotations from project stakeholders, a complete collection according standardised SOLARGE questionnaire had to be carried out. Within the course of this work, the questionnaire became very extensive. "We spent much time on making it in-depth, and data acquisition is time-consuming" explains Wolfgang Sellmeier, administrator of the Good Practice database. "Nevertheless, we are rewarded with a real treasure trove." Since the stocktaking in the SOLARGE partner countries showed that there were much fewer outstanding projects than expected due to the comparably short time of experience with large systems, many projects had strengths as well as weaknesses. SOLARGE partners therefore opted for labelling the project "good" instead of "best" practice. Currently the database includes more than 50 portraits of multi-family and pension houses, hotels, hospitals and sport centres and new examples are added continuously. The data sheets are divided into three major sections. The technological description includes nearly every imaginable data one could wish to know about including e.g. operation modes, yields and monitoring. The second section on financing and investment allows an insight into the basic economic data, whereas the third section on development describes problems, lessons learned and recommendations. On the whole, the database is easy to navigate – projects can be selected according to country, building type or size of CSTS. Now that the basic set-up of the data collection has been started and the feeding-in is underway, the only thing that is still missing is more publicity. So if you wish to know more about the database, you are welcome to click on the website **www.solarge.org**

Germany: Successful Pilot Training

Developing and implementing training is an integral part of SOLARGE to overcome information lacks of installers and suppliers. Now the first pilot training was carried out in Germany with promising results.

SOLARGE project coordinator target GmbH has a long history of implementing training in the field of solar systems. In the past no training was specifically dedicated to systems larger than 30 square metres. With the input from experts, market analysis, good practice and suitable excerpts from existing training, target GmbH set out to create the first pilot training. On 29th and 30th of May 2006, the first course was carried out near Hannover with the aim to test the methods and information transfer. Each participant received a manual with around about 280 pages. The content is structured according to a modular set-up and each subject has typically only one page basic introducing text. "The pilot training was a success" explains coordinator Bodo Grimmig. "Although only a comparatively few registered, all were highly qualified and represented a first choice of target group". The participants rated the training to be of very high quality. Suggestions included the wish to further customize the vast information according to specific interests. The next steps will be to carefully revise the training unit on the basis of the experience from the pilot course, translate the revised contents into English by September 2006 and then make it available to all SOLARGE partners.

Experts Discuss Solar Energy Control Centre

On June 15th target GmbH was host to a conference on markets, technologies and experiences relating to CSTS. 70 national experts attended the event. The concept of control centres was the topic most discussed.

In cooperation with the regional Climate Protection Agency, the regional Climate Protection Fund and the Federal Association of the Solar Industry, target GmbH invited national experts to a symposium on large-scale solar thermal systems. The event offered five hours of intense input on markets and their potential, technologies and fields of application as well as practical experiences. A point that raised a vivid discussion was the recommendation to install CSTS with a so-called energy control centre. This completely preassembled hydraulic station connects the solar system to the boiler or district heating system and can lead to appreciable energy savings, especially when conventional systems are substituted. The technical discussions where counterbalanced by reports from versed practitioners. Since most participants came from industry and authorities, the straightforward report on difficulties from a very experienced installer was much appreciated. The lectures are available in German from the SOLARGE website **www.solarge.org/index.php?id=357**

Province of Turin Supports CSTS and Inspires other Authorities

A comprehensive RES promotion programme was set up by the Province of Turin in 2003 including a scheme for CSTS in cooperation with EU co-financed projects such as SOLARGE. The success of this policy inspired the Province of Rome to join in.

Involving authorities is a key to sustainability at local level. The SOLARGE partners count on this cooperation and support authorities in promoting large-scale solar heating systems. Councillor for the environment of the Province of Turin, Dorino Piras, gives a clear view on their local approach: "Our promotion for renewable energies base on a complete support to investors. It is essential to create subsidy schemes and inform about their existence. Furthermore, installers must be trained, especially in design and installation. Finally, an adequate monitoring should check the operation of each system". A programme particularly appreciated was *Promozione di impianti solari di grandi dimensioni* (promotion of large-scale solar heating systems), presently in the concluding phase. Three demonstration plants have been realised successfully:

- The first plant was installed on the environmental education centre of Pracatinat in Fenestrelle. Flat-plate collectors with a capacity of 100 kW_{th} supply heat to the hostel of the centre, equipped with 200 beds. A display in the entrance hall presents the daily yields to visitors.
- The second plant was installed at the Asilo dei Vecchi in San Germano with 98 home places for the elderly. Evacuated tube collectors with a capacity of 50 kW_{th} are mounted on its roof. Solar hot water is supplied to the home, its kitchen, its laundry and to the space heating system.
- The first installation of a "solar roof" collector (63 kW_{th}) in Italy was realised on an apartment building with 60 dwellings in Moncalieri built by the Turinese social housing company ATC.

You will find all related data and the practical experiences in the Good Practice database on the SOLARGE website. The Province of Turin subsidised the plants with 33,000 Euro each. In addition the

Province supported the technical monitoring, carried out by SOLARGE partner Ambiente Italia. A brochure informs authorities and stakeholders about the results. Inspired by this practical and successful approach, the Province of Rome set out developing a similar programme on its territory and recently joined the SOLARGE project.

Further information on Turin visit
www.provincia.torino.it/ambiente/energia

Further information on Rome visit
www.provincia.rm.it/FilesDocumenti/Energia/energia.htm

Languedoc-Roussillon: Massive Investments in Solar Thermal Energy

The Languedoc-Roussillon Regional Council will invest 5 million Euros in large-scale solar thermal systems (CSTS) for social housing in 2006.

The Regional Council launched a programme for renewable energies and greenhouse gases decreasing, and wishes to become the first region of France as regards to renewable energies. The priority is the development of renewable energies in social housing, with an ambitious objective: to install CSTS for 25,000 social dwellings within five years. To reach this goal, the Regional Council signed a convention of objectives with the URO Habitat (social union for dwellings in Languedoc-Roussillon) to develop renewable energies and energy performance in the social housing. Thus Languedoc-Roussillon Regional Council and the URO Habitat decided to link their efforts to promote and encourage the quality of social dwellings construction, combining comfort and energy saving by using renewable energies, and especially solar thermal energy.

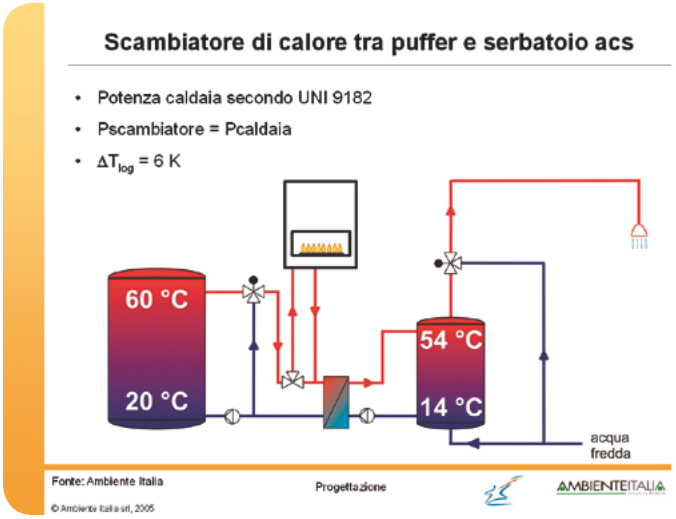
Dutch Social Housing Associations go for CSTS

A trigger for installing CSTS in multi-family buildings is often an overall renovation of the hot tap water system. Now more and more housing associations in the Netherlands have seized this opportunity. Small individual gas-fired kitchen boilers are replaced by a central solar hot water system. Indoor climate and the hot water comfort improve significantly. But more relevant than this: improvements can be done without raising the overall costs for tenants.

Social housing association TablisWonen already installed 780 sqm of CSTS on 10 apartment buildings with 800 apartments. This makes 20 % of their housing stock being equipped with a CSTS. A considerable success that has been recorded by SOLARGE partner Ecofys in Utrecht. When interviewed, one project manager stated that "net costs for our tenants did not increase, while the comfort and living conditions have improved significantly. The tenants are very happy with the new hot water supply. We only received positive responses." On the whole, projects analysed showed that the extra "solar" rent that had to be charged was often more than counterbalanced by the savings of energy costs. This positive experience seems to spread as other associations are also clearly on a solar way. WonenBreburg installed 1,400 square metres of solar thermal on 7 buildings and Woonveste installed the first system on the Grevelinge building and is planning more. For all these housing associations installing CSTS has become an integral part of their sustainability policies. And efforts to expand the definition of "large" are also underway. As a successor of the Schalkwijk 2 MW_{th} plant, the municipality of Amsterdam-Noord and energy company ENECO are planning a large renovation project with 1,172 dwellings ('Het Breed') in which a CSTS is planned with the size of 2,300 square metres. The overall CO_2 reduction of the integral system (solar collectors, seasonal storage of energy in aquifers and heat pumps) will be 55 %.

For more information, please have a look at the Dutch part of the SOLARGE Good Practice database.

Italy: Training on CSTS and Solar Cooling



In the framework of the Italian SOLARGE campaign, Ambiente Italia and Politecnico di Milano developed a specific training to address the topic of large solar thermal systems as well as solar cooling for planners, engineers and architects. The aim is to disseminate basic knowledge on these rather innovative topics. The 15 hour training is divided into three sections. The first one is to present the 'state of the art' and most common plant schemes, the second is dealing with the design and the economics of solar systems and the third one focussed on solar cooling plants. Two courses have taken place so far, at the SOLAREXPO exhibition in 2005 and 2006. More courses will be organised in October 2006.

For further information, please visit the Italian SOLARGE website www.solarge.it

Current

March 2006: The Spanish government adopted the new *Código Técnico de la Edificación* (CTE), which includes an obligation to cover 30 to 70 percent of the domestic hot water demand with solar energy. This code is part of the national implementation of the EU Directive on the Energy Performance of Buildings and will come into force by September. Ecofys Spain estimates that the annual market growth for solar systems in the upcoming years will exceed the accumulated installed capacity in 2004. Because of the importance of the new CTE, the European Solar Thermal Industry Federation (ESTIF) has commissioned and published an English translation of the most relevant sections. **Find the translation as PDF on www.estif.org/12.0.html#730**

30th May 2006: The European Solar Thermal Technology Platform (ESTTP) was officially launched in Brussels by EU Energy Commissioner Piebalgs. ESTTP will develop a comprehensive strategy for research and market deployment of solar thermal technologies in Europe. **Have a look at www.esttp.org**

Upcoming

15th September 2006: Symposium on CSTS Technology, Planning, Practical Experiences within the trade fair SOLTEC in Hamelin. Target groups: architects, planners, installers, manufacturers, contractors etc.

30th September 2006: In line with the approved CTE, the Spanish government is working on the modification of the homologation for solar systems that will lead to a more open market. Currently, only Spanish homologation is accepted, but most probably the change will allow the Solar Keymark. The new regulations are expected to be approved by the end of September 2006.

5th–7th October 2006: SOLARGE presentation at the International Congress on Renewable Energies and Water Technologies CIERTA in Almeria.

October 2006: A new and last call for proposals under the current "Intelligent Energy – Europe" (IEE) Programme has been published in May 2006. European organisations can apply for financial support for their projects before 31st October 2006. **Please consult ec.europa.eu/energy/intelligent/call_for_proposals/index_en.htm**

October 2006: From autumn onwards there will be new training sessions on the topic of "Large-scale Solar Thermal Systems" in Lower Saxony, Germany, organised by target GmbH.

3rd–4th November 2006: SOLARGE workshop in the framework of the conference on regional solar initiatives RegioSolar in Hannover. **More on www.regiosolar.de/konferenz/index.shtml**

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Imprint:

Published and edited by

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June 2006