CombiSol

Standardisation & Promotion of Solar Combisystems

Combisol project: Standardize and promote solarcombisystems

Solar combisystems (SCS) are solar heating installations providing space heating as well as domestic hot water in buildings. Within a global solar thermal energy strategy, SCS are a key element to decrease the fossil energy demand for heating needs in existing and new buildings. From that point of view, their further market deployment will contribute to achieve the objectives of the European Action Plan and of the Energy Performance Building Directive. This project will help to reduce the use of fossil fuels and hence also the emission of greenhouse gases.

Context and summary of project

The large number of existing hydraulic layouts, the differences in storage volume and the various degrees of prefabrication make the installation difficult for installers and increase the risk for mistakes during installations.
Standards are well defined for solar collectors (EN 12975) and for small domestic water heaters (EN 12976), but not for SCS. For them, some standards are available (ENV 12977) but not already validated and not able to deal with all systems available on the market
During 3 years (December 2007 – December 2010), experts from research, test institutes and industry will work in the aim to encourage an accelerated deployment of SCS market – hence a higher share of heat produced by solar energy - and promote an improved quality of the installed systems.

Practical objectives and advantages of Combisol

> promote best practices for solar combisystems in new and existing buildings,

> promote standardized systems and cost-effective solutions,

> propose recommendations to manufacturers with regard to combisystems design,

> provide an appropriate test method for SCS accepted by manufactures and that can be incorporated into European standards improve training materials and courses for installers,

> develop specific dimensioning tools in order to facilitate the recommendation for solar combisystems based on the Energy Performance Building Directive (EPBD) methodology,

> increase consumers confidence, providing information on energy efficiency of solar combisystems, based on in-situ monitoring and lab tests.

> give information to national and local authorities in order to adapt subsidy schemes

Target groups and key actors

> Solar thermal manufacturers

> Solar thermal installers

> National and regional authorities

> Technical experts / independent bodies for testing, standardisation and certification

> Additional target groups: energy agencies, architects, housing companies

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Organisation of the project

In order to reach practical goals, the work has been structured and focused around the following main tasks:

Promotion of standardised SCS

Analysis of existing systems - Definition of best practices designs - Elaboration of guidelines for design and dimensioning

Wide evaluation of SCS at different levels in successive steps

Qualitative evaluation - In situ monitoring - Lab tests - Cross comparison of respective results – Draft new standard for test method

Improvement of adapted technical support and professional skills

Simplified tools for simulation, evaluation of performance of SCS, evaluation of global energy savings – Training courses for installers, guidelines for manufacturers

Dissemination of learning and results

Workshops for installers and manufacturers – Articles in professional reviews – Website

How to contribute and/or take benefit practically from Combisol?

- Manufacturers: answer to calls organised through associations for qualitative evaluation, in situ monitoring and lab tests – use results and tools to provide better adapted systems to customers needs
- Installers: provide valuable installations to manufacturers for calls - improve your skills with developed tools and training schemes – better advice your customers with these tools
- Both: participate to workshops organised during the project in each country, provide feed-backs to projects partners through associations

Project partners

- CEA (France)
- INES Education (France)
- ADEME (France)
- ITW (Germany)
- PlanEnergi (Denmark)
- AEE INTEC (Austria)
- SERC (Sweden)

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Intelligent Energy Europe

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