

WP 2. Standardised system concepts

Work package No.: WP 2	Starting month: 0									
Work package title: Standardised system concepts										
Activity Type¹: Coordination activities										
	Leader	Other partners with major involvement								
Partner No.:	ARS	ITW	SP	NCSR	INTA	ECO	AEE	UNI O	-	-
Person-months per partner:	6.4	0.6	0.9	2.0	0.9	0.6	1.7	1.7	-	-

WP 2: Objectives

The goal of this work package is to overcome the barriers that hinder the dissemination of larger solar systems to become standard in hot water supply for multifamily houses and other buildings with a large hot water demand.

Solar thermal systems are quite well introduced in single-family houses. For a wider dissemination of solar thermal systems it is necessary to intensively concentrate on multi family houses (more than five dwellings) and other applications for larger buildings (student residences, hospitals, retirement homes etc.). Concerted with the activities in the SOLTHERM Europe initiative this work package aims at standardised concepts for larger solar thermal systems. Furthermore, solar cooling systems for larger buildings, such as office buildings and multi family houses will be considered.

Gaps in the knowledge base between building and solar industry with regard to installation and performance of systems for multi-family houses have today resulted in limited joint effort as well as in a lack of confidence of builders concerning solar thermal systems.

Often the two industrial sectors communicate poorly in the project situation through not understanding one another's concerns, intentions and technical capabilities. The end result of this lack of understanding are extra costs and difficulties in developing, specifying and manufacturing integrated solar thermal systems and ultimately, the high risk of serious failures in larger solar thermal systems that might discredit the technology and the solar industry.

WP 2: Description of work

1. Survey of the practice of designing, planning, installing and marketing larger solar systems in different European countries

1.1. Preparation of a questionnaire: Building industry, solar manufacturers, planners and installers from at least 4 European countries should report on their experience with larger solar heating systems. Based on existing experiences this questionnaire should focus on still unknown aspects (e. g. building integration, mutual expectations of the involved parties). The main outcome should be to become fully aware of the most important barriers that hinder a wider dissemination of solar heating systems.

1.2. Organisation of national workshops with planners, solar manufacturers and building industry discussing their attitude, their problems and possible opportunities concerning solar heating systems for larger buildings.

¹ For Coordination Actions each work package must relate to one (and only one) of the following three possible Activity Types: Coordination activities, Training activities, Management activities.

2. Components, technical issues

- 2.1. Analysis of existing larger solar heating and cooling systems for multi-family houses and similar applications. Evaluation of costs, functionality of components, yields, etc. Analysis of already existing monitoring data of large solar heating systems.
- 2.2. Recommendations for improved and standardised components for larger solar heating systems.
- 2.3. Evaluation of existing system concepts, exchange and dissemination of best practice models.

3. Marketing and financial issues

- 3.1. Investigation and evaluation of existing financing models for larger solar heating and cooling systems, including contracting. Development of best practice models and exchange of experience.
- 3.2. Exchange of experience on simple monitoring methods and definition of common methods for use in connection with guaranteed yields for larger solar heating systems (sometimes needed as precondition for subsidising larger systems).

4. Development of standardised concepts for larger solar heating systems

- 4.1. Recommendations for standardised concepts for solar heating systems including technical issues of designing, planning, installing and maintenance as well as concepts for financing and marketing (best practice models).

WP 2: Deliverables

- WP2.D1: Questionnaire concerning larger solar thermal systems
- WP2.D2: National workshops (3 to 4) with planners and building industry
- WP2.D3: Report concerning investigation and evaluation of existing financing models for solar domestic hot water (SDHW) systems in multi family houses and other large buildings.
- WP2.D4: Material for marketing SDHW systems to investors in the building industry
- WP2.D5: Technical and financial guidelines (standardised concepts) for installation of SDHW systems in larger buildings
- WP2.D6: Presentations, publications

WP 2: Milestones² and expected results

- WP2.M1: Questionnaires evaluated (month 12)
- WP2.M2: Technical investigations concluded, report best practice models defined (month 18)
- WP2.M3: Definition of standardised system concepts (month 24)

² Milestones are points where major results have successfully been achieved as the basis for the next phase of work, or which serve as control points at which decisions are needed; for example concerning which of several technologies will be adopted as the basis for the next phase of the project.