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Promoting Energy efficiency to Local Organisations
through dissemination Partnerships in Europe
Best Actions for Collaboration in Countries
for a High efficient Use of energy in Structural funds

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Sunny Resorts - - Austria

Implementation of solar technology for the preparation of domestic hot water for hotels and other places of accommodation.

Target Groups	Sector	Field
- Trade and commerce	- Buildings (including municipal properties)	- RES - Monitoring & Management - Education and training

ANALYSIS

The goal of the project was to prepare the basis with regard to the wide-scale implementation of solar technology for domestic hot water for places of accommodation. This was achieved by preparing planning documentation especially for plants of this kind and identifying the pre-conditions for the installation, by realising and monitoring demonstration plants accompanied by a information campaign in the tourism sector as well as training programmes for planners and fitters. The project was lasting from 1996 - 1999 and had been supported by the EC / DG TREN within the ALTENER programme.

MANUAL AND SOFTWARE TOOL FOR PLANNERS AND FITTERS

Knowledge and experience of planners and fitters turned out to be insufficient in many cases. A manual including checklists should help to avoid problems and mistakes and increase the quality of the installed facilities. With the simulation software SUNHOTEL a simple planning tool was developed in addition to the manual.

DEMONSTRATION SOLAR PLANTS

Six demonstration plants were realised within the project in Austrian places of accommodation. The size of the collectors varied between 30 and 112 m² (typical 60m²); the capacity of the solar hot water tank ranges between 3 x 800 and 14.000 litres; for the additional heating system different technologies were used, based on oil, gas, wood-chips or electrical cartridges.

Experiences from the demonstration projects in the field of planning, realisation and operation, were incorporated in the planning manual. The hydraulic systems for these plants comply with most of the hydraulic variants incorporated in the SUNHOTEL simulation software.



SOLAR-COLLECTOR RESTAURANT - HOTEL BIELERHÖHE

Source: energytech.at, Vorarlberger Illwerke AG



KOLPINGHEIM DORNBIERN

Facade with integrated solar-thermal collector.
Source: energytech.at, DOMA

COST AND BENEFITS

Places of accommodation with a high hot water demand in summer have almost ideal conditions for thermal solar plants. Some of the installed demonstration plants obtained specific collector yields of more than 400 kWh/m² per year, typical values for single family homes range between 300 and 350 kWh/m² per year.

PARTNERSHIP

A key role for the success of the solar technologies in the tourist sector is information and awareness of the owners or management of tourist facilities as well as training and education of planners and fitters.

The first target group was addressed at general events for the tourist sector with a strong focus on non-technical information, i.e. economic, financial and marketing aspects.

Workshops for the latter target group provided general knowledge about solar thermal systems in places of accommodation, aspects of planning and dimensioning, information to monitor the operation of solar systems as well as a platform for the exchange of experience.

RECOMMENDATIONS

A water consumption profile turned out to be a critical precondition for an economical dimensioning of the solar plant: the range of water consumption per guest and day varied between 22 and 145 litres. It turned out that relatively simple measures could reduce high consumption rates significantly and could therefore reduce the investment costs of the solar plants.

SIZE DOES MATTER

The project team identified deficiencies of awareness and knowledge about the operational correlation of solar energy supply and hot water demand. Another crucial aspect - mostly for economic reasons is the proper dimensioning of the system's size (collector, hot water tanks, additional heating system). The planning manual covers these aspects with extensive sections.

TO KNOW MORE

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USEFUL INFORMATION

List of Publications

**SONNE FÜR HOTELS -
PLANUNG VON
KOLLEKTORANLAGEN ZUR
WARMWASSERBEREITUNG
FÜR
BEHERBERGUNGSBETRIEBE /**

**C. Schwenk / Institut
für
Solarenergieforschung
GmbH - ISFH /
AEE INTEC,
Arbeitsgemeinschaft
ERNEUERBARE
ENERGIE /**

German / 1999

List of Internet sites

Project description (German) / <http://energytech.at/solar/results.html?id=1013>

**Sonne für Hotels - Planungsunterlagen (Information about the
manual, German) /**

<http://energytech.at/solar/results.html?id=118>

THIS CASE HAS BEEN REALISED BY

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