Architectural integration of solar thermal energy systems

Alpiner Stützpunkt Schiestlhaus, Austria

Photo: DI Wilhelm Hofbauer/Treberspurg & Partner Architekten
PROJECT

The Schiestlhaus of the Austrian Tourist Club (ÖTK) is situated at an altitude of 2154 m above sea level on a plateau directly under the main summit of the Hochschwab. It is the first large mountain refuge built to passive house standards with the capacity to accommodate 70 people.

The south-facing facade has been designed as an energy-facade system and is the main energy supplier of the building. The upper story features 46 m² of facade-integrated solar collectors for the generation of thermal energy.

Alpiner Stützpunkt Schiestlhaus
An integrated (overall) concept for an ecological alpine refuge hut based on solar energy

Photo: DI Wilhelm Hofbauer/Treberspurg & Partner Architekten

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Key figures

- 550m² effective area (including basement),
- 70 beds,
- 160 seats (including terrace)

Heating system

Heat supply and storage is effected by means of three buffer storage tanks with a total capacity of 2,000 litres which are fed, for the most part, by the facade integrated thermal collectors.

Heat supply relies on the following system:
- The solar collector transfers heat via heat exchanger to the buffer storage tanks.
- A rape oil operated unit loads heat directly into the buffer storage tanks.
- The solid fuel range can also transfer heat into the buffer storage tanks.

Photo: DI Wilhelm Hofbauer/Treberspurg & Partner Architekten
**Built/Completion:** 2005

**Client:** Austrian Tourist Club.

**General Planning:** Contractor and architect pos Treberspurg & Partners Architects

**Building Physics:**
DI Wilhelm Hofbauer, DI Dr. Karin Stieldorf

**Design:**
solar4alpin (Rezac shaft village Oettl-Treberspurg)

**Address/Location:** Hochschwab, Stm

**Type of project:** Sports and leisure

**Read more:** [http://www.treberspurg.com/home/alpiner-stuzpunkt-schiestlhaus/](http://www.treberspurg.com/home/alpiner-stuzpunkt-schiestlhaus/)