Environmental Research Station Schneefernerhaus - UFS, Germany

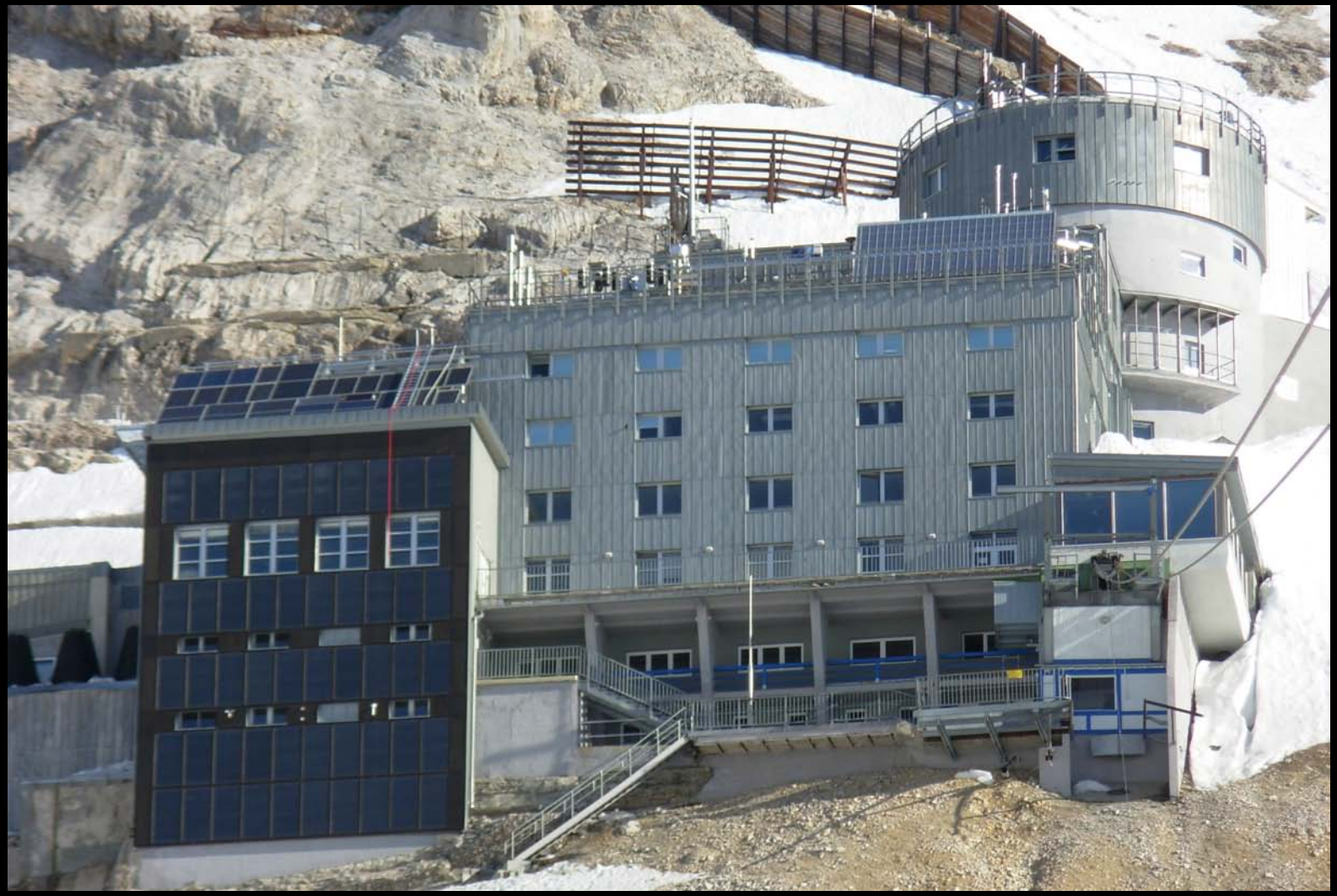


Photo: Fraunhofer ISE (Fraunhofer Institute for Solar Energy Systems)

Environmental Research Station Schneefernerhaus - UFS, Germany

Solar collectors integrated in the façade

PROJECT
Umwelt Forschungsstation Schneefernerhaus, 2 650 m a.s.l., was established in 1998 by the State of Bavaria to promote atmospheric research and to assist the German Government in supporting the United Nation's Global Atmosphere Watch programme (GAW)

It is located at Germany's highest mountain "Zugspitze" with year-round access by cable cars and - for cargo transport and special events - a directly linked coghweel train.

100 m^2 solar collectors integrated in the building façade are contributing to hot water production and space heating.

Photo: Fraunhofer ISE (Fraunhofer Institute for Solar Energy Systems)

Heating system

The building is a reconstructed stone building from early 30's of the 20th century. Additional thermal insulation has been put in at a later point. The façade mounted solar system is producing domestic hot water and contributes to space heating. The heat distribution system is water based, with floor heating and radiators.

Auxiliary heating;

Heat pump and electricity

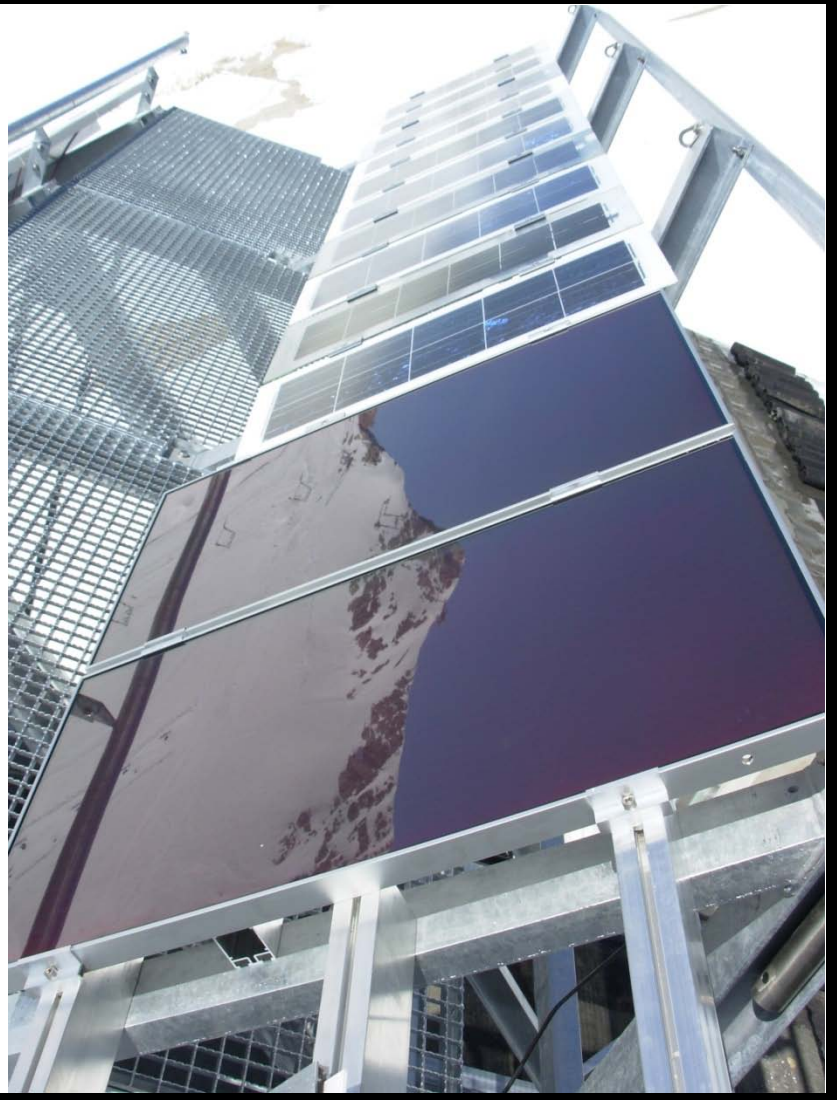
Collector area;

100 m^2

Heat store description:

100l water storage

Photo:
Fraunhofer ISE (Fraunhofer Institute for Solar Energy Systems)



SOLAR COLLECTOR

Type:
Vacuum flat plate collector
TS 400 (producer THERMO/SOLAR Ziar)

TS 400 is intended for installations in which the working temperature is more than 80 °C or when high thermal output is necessary during low sunlight intensity (during winter). The vacuum (insulation) guarantees stable operating parameters throughout the collector lifetime.

Dimensions (mm): 1009 x 2009 x 75
Weight (kg): 45
Efficiency (η_0 ($\Delta T=0$ K) %: 78,5 (aperture)

http://www.thermosolar.sk/stara_stranka/aa-eng.htm

ECONOMY

Collector prize; 943 € /2009
Solar gain; 60 000 kWh/year

PHOTOS;

Fraunhofer ISE
(Fraunhofer Institute for Solar Energy Systems)

- Consultants:
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  Energietechnik
  Regensburg
- Project management:
  THERMO/SOLAR
  Energietechnik
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- Address:
  Peak Zugspitze
- Location:
  Garmischpartenkirchen,
  Germany
- Project period:
  1996
- Type of project:
  Institution
- Read more:
  http://www.schneefernerhaus.de/startseite.html