

Georg-August-Universität Göttingen

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Energetic activation from roofs for both old and new buildings

Introduction

- Increasing energy costs burden the economy.
- Use of solar energy gains increasing importance.
- Offered solutions are not economically feasible without subsidies.
- Roofs are suitable for the power generation with commercial metal roof cladding.



Methods

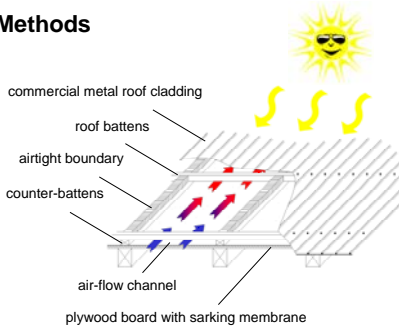


Figure 1: Construction of a solar roof.

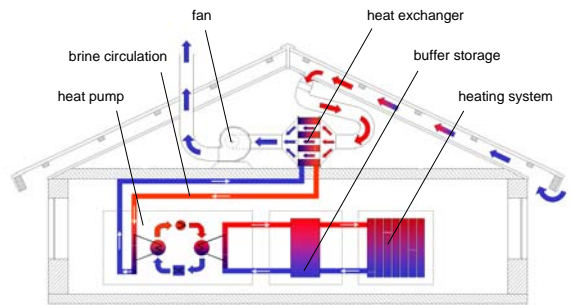


Figure 2: Scheme design for accumulated heat utilization under metal with a heating pump.

Results

- Thermal energy can be gained by commercial metal roof cladding.
- The strategy is especially suitable for buildings with large roofs.
- The application of the solar roof solution is in the low temperature range.

Future prospects

- The solar roof is similarly suitable for new buildings and the renovation of old buildings.
- Normally, cost of metal roof claddings are comparable to cost of tiled roofs.
- The first practice tests for the heating support and industrial water warming have been started.
- Energy costs for the drying of crops can be reduced.
- First strategies for the air conditioning of building complexes are being planned.

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