



House Breuer, Tschagguns

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Full-surface, integrated Photovoltaic and solar thermal modules

Solar

What is the solution?

The full-surface arrangement of the integrated PV and solar thermal modules gives the roof a uniform appearance, which is additionally supported by choosing non-reflecting modules with a dark background and metal frame.

Why does the solution work in terms of compatibility with conservation and technical aspects?

The solar thermal panels provide the hot water heat demand in the summer months and a part of the room heating demand in spring and autumn. The logwood heating system is thus relieved. The electricity produced by the PV panels cover a part of the domestic electricity, especially in the summer months. The installation of full surface, integrated PV and solar thermal modules is not compatible with the conservation approach because the modules replace the existing roof covering completely to achieve the uniform appearance of the new roof.

Description of the context:

Part of a best practice – Projekt Breuer, Montafon

Pros and cons of the solution:

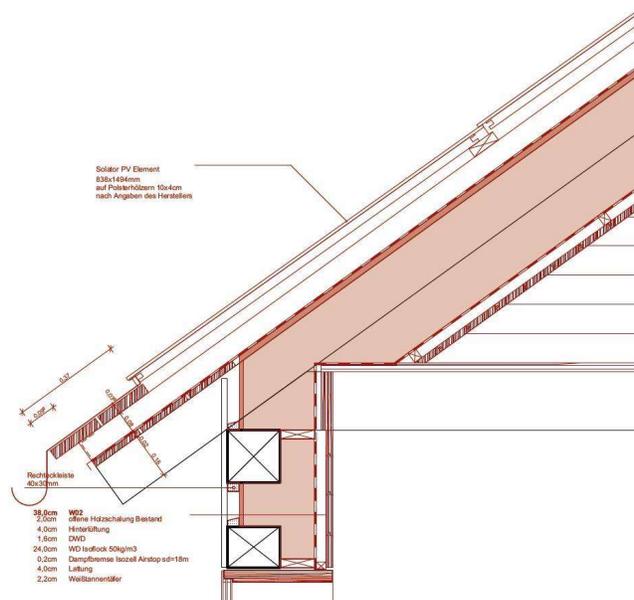
By installing solar thermal panels, the end energy demand of the heat generator, in this case the logwood heating system is reduced, because the panels cover the hot water demand in the summer months and a part of the room heating demand in spring and autumn. Furthermore, less electricity has to be taken from the grid, because the produced electricity of the PV panels

covers part of the domestic electricity, especially in the summer months. The existing roof covering is completely replaced by the full surface, integrated PV and solar thermal modules, which is a disadvantage from the conservation point of view. Nevertheless, it is possible to remove the panels without damaging the original roof structure and replace them by a roof covering similar to the original one.

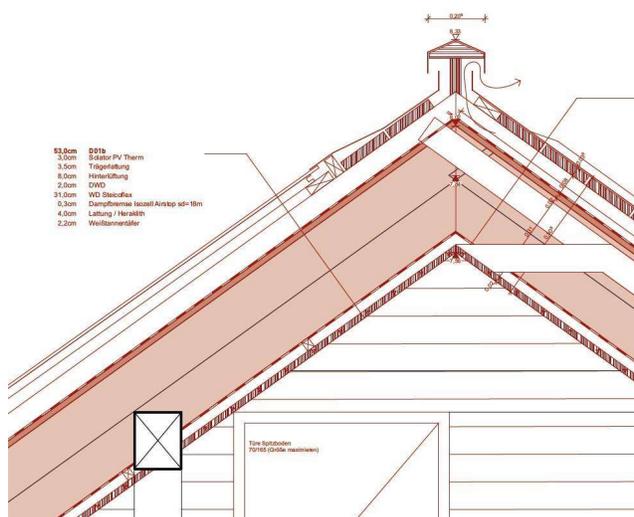
Type of data available (level of information, simulation):

Detailed drawings of the roof structure with the integrated PV panels. Pictures of the completed building.

Are there any related publications or pictures of the solution?



Roof structure with the integrated PV panels, eaves ©Bernhard Breuer
Produktentwicklung Architektur Städtebau



Roof structure with the integrated PV panels, ridge ©Bernhard Breuer
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Solar systems and preservation of historical monuments

