



Weyerguet farm



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Introduction

The refurbishment of the Weyerguet Farm in Wabern, Germany, is a clear example of solar architecture on a historical building in an agricultural zone. The farm, originally built in 1842, was transformed into a condominium with 9 apartments and common areas, equipped with a photovoltaic system integrated into the roof. Before the refurbishment, the building consumed approximately 213,600 kWh/year. The energy efficiency measures adopted (insulation of the roof, walls and floor, new windows, and geothermal heat pumps) led to a reduction in the overall electricity requirements of almost 80%. Thanks to the energy efficiency works and solar architecture carried out, the building was awarded the 2020 Swiss Solar Prize.

Source: 3S Solar Plus AG, [Schweizer Solarpreis 2020](#)

Design approach

The farm was refurbished in accordance with sustainable criteria; the materials used were mainly wood and ecologically compatible building components. The living area, which was increased by almost $\frac{3}{4}$, is characterised by a modern interior design, while maintaining the rural character.

Aesthetic integration

The BIPV modules installed are flat, in matte glass, and are terracotta in colour. They blend perfectly with the form and colour of the building and the surroundings.

Energy integration

By generating approximately 37,600 kWh of electricity per year, the BIPV system covers 78 % of the energy requirements of the condominium.

PROJECT DATA

Project type	renovation
Building use	residential
Heritage constraint	listed building
Building address	Weyerstrasse 64, Köniz, Switzerland

BIPV systems

BIPV SYSTEM DATA

Architectural system	opaque roof
Integration year	2019
Active material	monocrystalline silicon
Module transparency	opaque
Module technology	glass-backsheet, hidden PV, customized modules
System power [kWp]	37
System area [m²]	261
Modules orientation	East, West
Annual FV production [kWh]	37600

BIPV SYSTEM COSTS

Stakeholders

Main building designer

Halle 58 Architekten GmbH

BIPV components producer

3S Swiss Solar Solutions AG
Schorenstrasse 39, Thun, Switzerland
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Collaborators

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