

## SolarTech Power Solutions

# Installation of solar panels on the sloping roof of a self-built house

**Scooter battery**

The battery is installed in the pedal



**Built-in battery in car beam**

The battery is installed in the car beam



**Pack the battery in the box**

This is the battery installation box, replace the battery core without changing the shell



**Ebike battery**



## Overview

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Can a wall install a photovoltaic system?

Although less efficient, wall installations can supplement a photovoltaic system effectively. Balcony-mounted panels are primarily used in residential buildings. Typically, 1-2 panels are installed on the balcony railing. This setup can help reduce energy costs for apartments where roof installation is not feasible.

What is a design load for solar panels?

When considering the installation of solar panels, the design load is the amount of weight that the roof and support can bear without being structurally compromised. For example, sloping roofs are subjected to gravity loads and wind loads, while flat roofs must bear additional loads.

Should you install photovoltaic panels on your property?

Year by year, more people choose to install photovoltaic systems on their property. When opting for this form of energy generation, it is crucial to select appropriate panels and consider the right location for the installation.

Where should photovoltaic panels be installed?

The choice of location is a critical factor during the installation of photovoltaic panels. Roofs—flat or sloped—are the most common installation sites, offering excellent sun exposure and energy production optimization. However, in some cases, such as when the roof is unsuitable, ground installation may be a better option.

What type of roof is best for a photovoltaic system?

Metal tile roofing is highly popular in Poland for its durability and ease of maintenance, making it an excellent base for photovoltaic systems. Panels are mounted using double-threaded screws anchored into roof beams. Aluminum adapters and rails are then attached, forming a foundation for the panels.

Which direction should solar panels be installed?

An interesting alternative is splitting the panels between east and west directions. This arrangement better matches energy production to daily demand, which often peaks in the morning and afternoon/evening. Installing panels facing north, however, is not recommended, as it significantly reduces energy output, making the system inefficient.

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