

## SolarTech Power Solutions

# Vertical solar panel generation



## Overview

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A vertical bifacial solar panel is, simply, a panel with photovoltaic (PV) cells on both sides that is installed upright rather than horizontally to face east and west, so they generate electricity with sunlight that reaches one side in the morning and the other in the afternoon. Do vertical bifacial solar panels increase energy yield?

A 2018 study by LONGi, for instance, showed that vertical bifacial solar modules can increase energy yield by 5-30 percent, depending on factors such as the region, ground surface reflectivity, installation height, mounting, and inverter choices. Vertical bifacial solar panels have two energy peaks, one in the morning and one in the afternoon.

What is a vertical bifacial solar panel?

A vertical bifacial solar panel is, simply, a panel with photovoltaic (PV) cells on both sides that is installed upright rather than horizontally to face east and west, so they generate electricity with sunlight that reaches one side in the morning and the other in the afternoon. Producing energy on both sides appears to lead to higher output.

Are vertical solar PV systems feasible?

The aim of this research is to study the feasibility of vertical solar PV systems, which differ from conventional systems in terms of installation conditions, to improve the PV hosting capacity and line utilization rate. Many studies have been conducted on vertical PV systems using bifacial modules.

What is the vertical output of a solar panel?

At latitudes between 25° and 45°, the vertical output ranges from 60 to 80% of the optimum, dropping to approximately 50% at latitudes within 20° of the equators. In all cases, the output loss can be easily offset with only a few percent additional cost associated with installing additional PV panels.

Can vertical solar PV systems improve the hosting capacity?

This corresponded to 78.8% to 80.2% based on the PVsyst simulation results. In particular, the investigations related to the peak generation levels and occurrence times of vertical PV systems provide insights into the practicality of vertical solar PV systems and their potential for improving the PV hosting capacity.

Why do we use vertical solar panels?

We have years of experience within the field and we are looking for collaborators and customers to spread the use of vertical solar panels because this permits more solar to be installed in our electricity grids. Learn more about the VPV Unit for rooftops from Over Easy Solar

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## Contact Us

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