

**PIENAAR ENERGY (PTY) LTD**

# **Are photovoltaic panels facing north and south**



## Overview

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Solar panels should face true south, not magnetic south. Use NOAA's magnetic declination calculator to find your local value and adjust accordingly. East-West Orientations Offer Strategic Value: While producing 75-85% of south-facing output, east and west-facing panels can provide superior financial returns by aligning with time-of-use electricity rates and matching typical household consumption patterns. Latitude-Based Angle Calculation. Some solar panels track the Sun whereas some, like the one above, are fixed in their angle. A solar panel will harness the most power when the Sun's rays hit its surface. Solar panel orientation refers to the placement, direction, and angle of solar panels, specifying the cardinal direction the panel faces, which helps it receive direct sunlight throughout the day. Arrays that are appropriately oriented can improve energy output by up to 30% or more <sup>2</sup>. However, factors such as roof slope and proximity to the equator may have some homeowners considering other directions (including north). This article explains why south-facing orientations are commonly preferred in the United States, how.

## Are photovoltaic panels facing north and south

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### Why Most Homeowners Get Solar Panel Direction Wrong (And How ...

While most solar companies default to "south-facing is best," the reality is far more nuanced. Your optimal panel direction depends on factors most installers never even consider.

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### North-facing vs south-facing panels [UK, 2026]

In this guide, we'll compare north-facing solar panels with south-facing ones, take a look at a real-world example, and consider whether it's actually worth having a solar panel system that ...



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### Solar Panel Orientation: Everything You Need to Know

The general rule for solar panel placement in the northern hemisphere is that solar panels should face true south (and in the southern, true north). This is usually the best direction ...

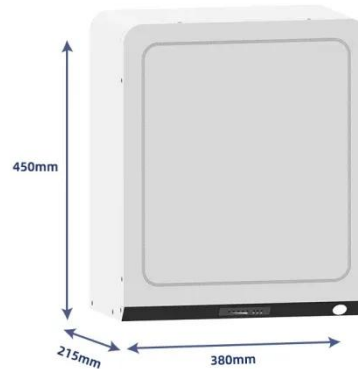
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## Maximize Efficiency: Best Direction for Solar Panels , Sunrun

Learn the best direction for solar panels to optimize energy efficiency and savings. Find expert advice on positioning your panels for maximum performance.

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## Solar Panel Orientation Guide

While the general rule is to face solar panels south, fine-tuning the azimuth angle - the compass direction of the panels relative to true south - can offer additional performance gains.

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## Solar Panel Direction & Orientation: 2025 Complete Guide

East or west-facing panels generate 75-85% of optimal output, and north-facing panels produce only 45-60% depending on latitude. The difference between optimal and poor orientation ...



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## Best Direction for Solar Panels to Maximize Savings -- SolarReviews

A north-facing roof is the worst direction



for solar, as panels will produce around 30% less energy than if they face south. The best angle for solar panels to be installed around 30 degrees, but it ultimately ...

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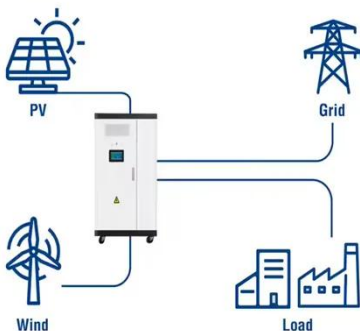
## How Roof Pitch and Orientation Affect Your Solar Production (And ...

Ideally, solar panels should face south in the northern hemisphere (north in the southern hemisphere) to get the most sun exposure. South-facing roofs get sunlight for the longest part of the day, maximizing ...



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## Which Direction Do Photovoltaic Roof Panels Most Often Face

While south-facing panels maximize annual output in the northern hemisphere, east/west or other orientations can be more practical or financially optimal in many real-world scenarios.

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## Solar panel orientation

In the northern hemisphere, the general rule for solar panel placement is, solar panels should face true south (and in the southern, true north). Usually this is the best direction because solar panels will

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