

# **North-South orientation angle of solar panels on sloping roofs**





## Overview

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Which direction should solar panels be angled?

Southern Hemisphere installations require north-facing orientation for maximum solar exposure. The sun's path runs through the northern sky, making this direction optimal for energy capture. Tilt angles follow the same latitude-based formula as northern regions. A location at 30° south latitude performs best with panels angled at 30°.

Which roof angle is best for solar energy production?

An angle that matches the latitude of the location generally offers the best year-round potential for solar energy production. The ideal roof orientation for maximizing solar panel efficiency varies by hemisphere. In the Northern Hemisphere, solar panels achieve maximum efficiency when mounted on south-facing roofs.

What is solar panel orientation?

Solar panel orientation refers to the compass direction that solar panels face when installed. This positioning determines which cardinal direction – north, south, east, or west – the panel surface points toward during operation. The orientation choice directly affects how much direct sunlight panels receive throughout the day.

How does the angle of a roof affect solar energy production?

The angle of the roof affects the intensity of solar radiation hitting the solar panels. An angle that matches the latitude of the location generally offers the best year-round potential for solar energy production. The ideal roof orientation for maximizing solar panel efficiency varies by hemisphere.



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