

Solar panel roof angle standard





Overview

For maximum output, the sweet spot for solar panels in the continental U.S. is facing roughly south and tilted between 15 and 40 degrees, according to the Department of Energy. What angle should a solar roof be built at?

In a perfect world (well my perfect world anyway) all roofs would be built at the ideal pitch to maximize solar output. However, as mentioned before, most roofs in Australia are at 15° or 22.5°. So how much solar power are you losing if your panels are not at the perfect tilt angle?

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What angle should solar panels be installed?

The optimal installation angle for solar panels matches the measurement value of your geographical location. People who live at locations measuring 35 degrees should usually select 35-degree roof pitches for optimal performance. Dynamic factors throughout the year, together with sun position, change the effectiveness of the recommended angle.

Are solar panels at a perfect tilt angle?

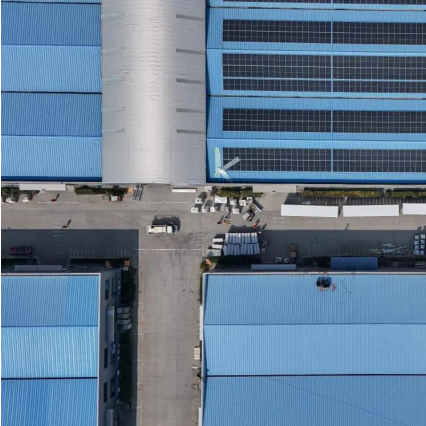
However, if my roof were flat output would be 12% lower compared to having the solar panels at 28°. So the moral of the story is: if your roof is pitched at more than 10°, your solar panels are probably not at their theoretically perfect tilt angle, but they will be close enough.

What is the best solar panel angle?

As we've mentioned earlier, your location's latitude plays a major part in determining the best solar panel angle. Across the continental U.S., the optimal tilt can range from 30-45 degrees. However, the further north you live, the more orientation can affect solar panel efficiency.



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