Solar Panel Tilt Spacing Finder

by Ryan Akers

User Guide

Enter the Panel Length (long side if designing for portrait orientation)

Enter the Panel Angle (measured from horizontal – **not the roof!**)

Enter the Roof Angle – Positive numbers (no + needed) if facing towards suns path, negative numbers for "reverse tilts"

Enter the postcode of the installation (this tool only works in Australia)

Hit Calculate

The resulting number is the spacing required from the back of the front row, to the front of the next row.

It is the distance between panels when measured along the roof (**not from an overhead view!)**

If you want the distance as measured on the horizontal, you will need to do some trig using the roof angle and the resulting space measurement as the hypotenuse to get the adjacent.

About:

This tool was created because I wanted to practice my python programming skills, and finding tilt spacing for reverse tilts was always a bit of a time consuming process when I was designing solar layouts.
It takes the entered postcode and finds the Lat/Long of that location, then calculates the position of the sun in the sky (altitude and azimuth) on June 21 at 10:00am. This is the "worst case" scenario that the CEC suggest to work to in their guidelines.
From there the length of the shadow cast is calculated, and displayed to the user.