

Solar Shading

If you want to place a solar array behind another array, you would need to ascertain whether the front array will cast a shadow on the rear array. There is a trigonometric formula to calculate how far the shadow of the front array will be cast at midday during the winter solstice. Winter of course is when the shadow is the longest and longer in the morning and afternoon than at midday. But to calculate the length of the shadow at any time of day and from that to calculate how far behind the front array you need to be gets very complicated, mathematically speaking. You would need to calculate how far south (in the southern hemisphere) the eastern corner of the front array casts on the rear array in the morning and how far south the western corner of the front array casts on the rear array in the afternoon, taking the width and placement of both arrays into consideration. To help to figure this out, we have produced a series of tables covering latitudes from the northernmost tip of Queensland down to Tasmania.

