

Shading of photovoltaic (PV) panels can significantly reduce system performance. When an array of PV panels are connected in series, shading on even one panel in the array can reduce the performance of the array as if all panels were shaded. This article studies the effect of shading on one system consisting of two arrays of four PV panels connected in series. The two arrays are connected in parallel and shaded by a flagpole. Shading effects are estimated in two manners. First, by looking at the percentage of the sky blocked by the nearby flagpole and another more comprehensive method looking at the spatial movement of shadow from the flagpole as it moves across the panels during the day. The method and tool used in the more comprehensive evaluation are discussed along with insight into when the spatial methodology should be used.