

## Clustering of Panels and Shade Diffusion Techniques for Partially Shaded PV Array-Review

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**Abstract :** The Photovoltaic (PV) generated power is mainly dependent on environmental factors. The PV array's lifetime and overall systems effectiveness reduce due to the partial shading condition. Clustering the electrical connections between solar modules is a viable strategy for minimizing these power losses by shade diffusion. This article comprehensively evaluates various PV array clustering/reconfiguration models for PV systems. These are static and dynamic reconfiguration techniques for extracting maximum power in mismatch conditions. This paper explores and analyzes current breakthroughs in solar PV performance improvement strategies that merit further investigation. Altogether, researchers and academicians working in the field of dedicated solar power generation will benefit from this research.

**Keywords :** static reconfiguration, dynamic reconfiguration, photo voltaic array, partial shading, CTC configuration

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