

## Design and Advancement of Hybrid Multilevel Inverter Interface with PhotoVoltaic

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**Abstract :** This paper presented the design and advancement of a single-phase 27-level Hybrid Multilevel DC-AC Converter interfacing with Photo Voltaic. In this context, the Multicarrier Pulse Width Modulation method can be implemented in 27-level Hybrid Multilevel Inverter for generating a switching pulse. Perturb & Observer algorithm can be used in the Maximum Power Point Tracking method for the Photo Voltaic system. By implementing Maximum Power Point Tracking with three separate solar panels as an input source to the 27-level Hybrid Multilevel Inverter. This proposed method can be simulated by using MATLAB/simulink. The result shown that the proposed method can achieve silky output wave forms, more flexibility in voltage range, and to reduce Total Harmonic Distortion in medium-voltage drives.

**Keywords :** Multi Carrier Pulse Width Modulation Technique (MCPWM), Multi Level Inverter (MLI), Maximum Power Point Tracking (MPPT), Perturb and Observer (P&O)

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