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Boost Converter and MPPT Based Grid Connected Photovoltaic System

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Abstract: *In recent years, there has been a significant rise in the popularity of renewable energy sources as a substitute for traditional electrical energy sources. This paper uses MATLAB/SIMULINK to create a 100kW grid-connected solar PV system simulation model. The solar array's performance is influenced by both temperature and solar radiation. Because of the nonlinear characteristics of the system, the power output varies continuously with changing weather conditions. To address this variability, Maximum Power Point Tracking (MPPT) is implemented to monitor and optimize the solar array's output for maximum power.*

Keywords: Photovoltaic (PV), MPPT, Boost Converter, Inverter

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