PSIM and MATLAB based Simulation of Photovoltaic Array with MPPT Algorithm for DC to DC Converter

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Abstract: *Solar energy is the most vital energy resource now a day since it is clean, pollution free, and inexhaustible. Semiconductor gave the crucial support due to its rapid growth in the power electronics techniques. In this paper, the maximum power point technique is used to increase the output efficiency of PV arrays. The output power of PV arrays changes with weather conditions, which means solar irradiation and atmospheric temperature. A perturbation and observation (P&O) method used to track the maximum power point of PV array voltage. To track the maximum voltage, we used boost convertor and simulated the circuit on Matlab and PSIM.*

Keywords: Modelling of PV arrays, boost converter, perturbation and observation method and simulation results**.**

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