A MAXIMUM POWER POINT TRACKING METHOD BASED ON

PERTURB & OBSERVE ALGORITHM FOR PV SYSTEM

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ABSTRACT

Maximum power point trackers (MPPTs) play very important role in photovoltaic (PV) power systems because according to the high cost and low efficiency of a PV system, it should be operated at the maximum power point (MPP) which changes with solar irradiances or load variations. So MPPT maximize the power output from a PV system for a given Atmospheric conditions i.e. irradiances and temperature, and therefore maximize the array efficiency. Thus, an MPPT can minimize the overall system cost. Maximum power point tracking (MPPT) is integrated with photovoltaic (PV) systems so that the photovoltaic arrays are able to deliver maximum available power. Maximum power point tracker (MPPT), can be used to maintain the PV array's operating point at the MPP. This paper presents an improved maximum power point tracking (MPPT) algorithm of a PV system under changing atmospherics conditions. The proposed MPPT is based on the perturbation and observation (P&O) strategy.

KEYWORDS: Maximum Power Point (MPP), Maximum Power Point Tracking (MPPT), Photovoltaic (PV), Perturbation and Observation Algorithm, Boost Converter