MODELING THE HILL CLIMBING METHODS OF MPPT TECHNIQUES USING MATLAB

Umamaheswari Krishnasamy
Department of Electrical and Electronics Engineering
Associate professor
Dr. Mahalingam College of Engineering & Technology

M. Shanmugapriya
Department of Electrical and Electronics Engineering
PG scholar
Dr.Mahalingam College of Engineering & Technology

Solar photovoltaic energy is one of the most growing technologies in the world with a growth rate of 30-40% per year. In this paper a step by step modeling of Maximum Power Point Tracking technique along with a 20 watts solar panel is presented. The Maximum Power Point Tracking (MPPT) algorithm finds the maximum power for the operation of the photovoltaic system during variation of solar irradiance and ambient temperature. In this paper two hill climbing methods of MPPT are simulated, namely perturb and observe method and the incremental conductance method which can improve the efficiency of the Photovoltaic system. The proposed model is simulated in the MATLAB Simulink. Whereas in this paper the difference between both hill climbing methods are studied.

 ISBN 978-93-81288-18-4