

## DC/DC Boost Converter Applied to Photovoltaic Pumping System Application

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**Abstract :** One of the most famous and important applications of solar energy systems is water pumping. It is often used for irrigation or to supply water in countryside or private firm. However, the cost and the efficiency are still a concern, especially with a continued variation of solar radiation and temperature throughout the day. Then, the improvement of the efficiency of the system components is one of the different solutions to reducing the cost. In this paper, we will present a detailed definition of each element of a PV pumping system, and we will present the different MPPT algorithm used in the literature. Our system consists of a PV panel, a boost converter, a motor-pump set, and a storage tank.

**Keywords :** PV cell, converter, MPPT, MPP, PV pumping system

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