

ABSTRACT

Photovoltaic (PV) is a renewable energy source that is in abundance and is often found in this world and is also a renewable energy that is very fast developing, many researchers out there have produced research on PV, but there are still many shortcomings from previous research, one of which is the less optimal power generated by PV using the pertub and observe algorithm when there is a fast change in irradiance.

There is an MPPT method that can produce optimal power at its output. Many factors affect PV, one of which is the change in irradiance which also affects the PV output. So for that we need a converter that can produce high efficiency and also a high voltage conversion ratio. In this study, using a modified pertub and observe algorithm to get the maximum and optimal power value at the PV output.

The purpose of this research is to produce an optimal tool with the maximum power point tracker (MPPT) method to charge the battery and also find out what effect the modified pertub and observe algorithm has on the MPPT method.

Keywords: PV, MPPT, Pertub and Observe Algorithm.