

ABSTRACT

Photovoltaic Panel (PV) is able to process various temperatures and solar irradiation into the desired purchasing power. PV panels can be used as public street lighting energy. In the general street lighting system the use of solar panels is very striking against the weather. The system is applied to minimal roads that will illuminate at night.

The research carried out is by applying the Maximum Power Point Tracking (MPPT) algorithm and Pulse Width Modulation (PWM). This is one of two DC End DC Inductors (SEPIC) DC / DC Inductors that are connected to MPPT and PWM and LED lights so that they can work directly in the day and day.

At this time, the purchase result during the day the PV panel fills the battery until it is fully charged, it takes a battery charging time of 7.51 hours. Whereas when the holiday battery LED lights for 45 minutes. After further research, the MPPT was 0.95%, while the efficiency obtained by PWM was 39.34%.

Keywords: Pulse Width Modulation, Maximum Power Point Tracking, Specific Single Inductor Inductor Converter, Photovoltaic Panel.