ABSTRACT

Application of solar panels as an alternative power generator by utilizing the energy of sunlight that is easily obtained. This is certainly very reasonable, considering Indonesia is a tropical country that has a source of abundant sunlight. Solar panels get power during the day and less power at night. At night the intensity of light received is not as big as during the day. With the dark conditions, solar panels can be used as data recipient media through Visible Light Communication. Data sent via LED lights on street lighting.

Visible Light Communication is a communication technology that utilizes visible light emitting from LED lights in communication systems. The use of visible light as a medium of communication offers several advantages which is not dangerous to human health, cheap, and easy in its implementation because the infrastructure has been willing ie the lighting device. On the other hand, when the solar panel is receiving data, the solar panel has its primary function as a power producer. While receiving light containing the data information, then the solar panel still generate power from the process. Power received from the LED lamp when sending data will be processed in order to be utilized.

The results of this Final Project produce Harvesting energy from 15 W LED lights that transmit data. Total energy that have been produced is 34.81 mAh in a total of 11 tests at a voltage level of 3 V on the super capacitor. With a total time of 142.58 hours on 10 WP solar panels and 51.85 hours on 50 WP solar panels.

keywords: Solar Panels, Visible Light Communication, Energy Harvesting, Super Capacitor