

## ***ABSTRACT***

*Solar energy is an energy source that will never run out of supply and this energy can also be used as an alternative energy that will be converted into electrical energy, using solar cells. However, most ordinary users are negligent in the use of unused electricity and lead to adverse electricity usage. The authors make an innovation to monitor electricity consumption and can control the use of which is controlled on the microcontroller, and there are current sensors and voltage sensors that can monitor usage on the load. Microcontroller which functions to turn on and turn off the power at the load using the relay module. In this final project, the author makes an application to facilitate the use of photovoltaics based on Android and can be applied to smartphones. It has a monitoring feature on the load and controls the switching process of PLN and Inverters. From the results of tests conducted by the ACS712 sensor has an error of 18%, and the ZMPT101B voltage sensor has 3 calibrations which makes the percentage of errors very small.*

*Keywords: Photovoltaic, IoT, MIT APP INVENTOR 2*