# *PROTOTYPE OF SOLAR POWER PLANT (PLTS) AND POWER MONITORING ON ANDROID APPLICATION-BASED REGULATOR AS THE MAIN ELECTRICITY SOURCE OF RICE ATM PROTOTYPE*

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## *ABSTRACT*

*Energy at this time has a very important role in human life. So far, the main support for energy needs is still relying on fossil energy which is increasingly scarce and expensive. This causes a shift in the use of fossil energy sources to renewable energy sources using Solar Power Plants (PLTS). This study aims to produce a PLTS system that is able to supply electrical energy for the Rice ATM prototype and can monitor the current and voltage generated by solar panels and monitor the current and voltage regulator output LM2596 in real-time with an android application based. Based on the test results that have been carried out as a whole, the entire system has successfully worked and is able to monitor the electric current and voltage on the solar panel and LM2596 regulator. From the results of measurements and analysis in this study, solar panels are able to produce daily energy with an average of 65.33 Wh with battery charging time from 30% to 100%, which is 2.65 days. The accuracy of the current, voltage, and power readings of the INA219 sensor ranges from 94% - 99%.*

***Keywords:*** *Renewable energy, Solar Panels, PLTS, INA219 Sensor*.