

# **DESIGN AND CONSTRUCTION OF SOLAR POWER PLANT WITH AN AUTOMATIC MOTION CONTROL SYSTEM AND INTERNET OF THINGS BASED MONITORING**

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## **ABSTRACT**

*Increasing population, economic growth triggers increased demand for world energy. The current supply of conventional energy means increased use of fossil energy supplies and increased emissions of gases that can harm the environment. If this happens continuously then our environment and future will be threatened. PLTS with an IoT-based automatic movement system is an attractive solution to overcome the increasingly worrying problem of the energy crisis. PLTS is designed to move automatically following the position of the sun both vertically and horizontally. This research aims to utilize PLTS resources to optimize battery charging sources, design, create voltage and current PLTS monitors, display measurement results in Blynk. Reading current and voltage values using PZEM-017. The design results of the dual-axis solar light tracking system on solar cells have an average voltage value of 13.9 V, an average current value of 0.51 A, and an average power value of 7.9 W. Meanwhile, solar panel testing statically, the voltage value was obtained with an average of 12.78 V, current value with an average of 0.42 A, and power value with an average of 5.4 W.*

**Keywords:** *Energy, PLTS, Automatic Motion System, IoT, PZEM-017*