

# **DESIGN OF A PLTS SYSTEM BASED ON MIRROR REFLECTORS WITH SCREEN MONITORING FOR FISH FOOD PRODUCTIVITY**

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## **ABSTRACT**

*The PLTS used for fish farming consists of several main components, namely solar panels to convert solar energy into DC electricity, inverters to convert DC electricity into usable AC current, and batteries or other energy storage systems to store excess energy produced. The energy control and management system plays a role in regulating the flow of electricity, both used directly and stored in batteries.*

*The test results show that the use of mirror reflectors can increase the average PLTS output power by 1,469 watts compared to without reflectors. The PLTS output current and voltage also increased significantly with the installation of reflectors. Testing the accuracy of the PZEM-017 sensor for voltage monitoring showed an average error tolerance of below 1.5%.*

*Further analysis of the performance of the energy storage system showed that the charging time for a battery with a capacity of 84Wh to full was 4.94 hours with a maximum power of 17W. While the battery life at 85% capacity is 7 hours 14 minutes.*

*It can be concluded that the design of PLTS with mirror reflectors and IoT-based power monitoring has proven effective in improving the efficiency and performance of the solar power generation system. Further development can be focused on optimizing the reflector design and IoT integration for wider applications.*

**Keywords:** *Solar Power Plant (PLTS), Mirror reflector, IoT-based power monitoring*