

SYSTEM MANAGEMENT ANALYSIS OF OFF GRID PLANTS AT THE WALI BAROKAH BOARDING SCHOOL, KEDIRI

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ABSTRACT

Based on its geographical location, Indonesia is located on the equator, which means that the area in Indonesia is continuously exposed to the sun throughout the year and makes Indonesia has abundant natural resources of solar energy. The Government of Indonesia through Government Regulation number 79 of 2014 concerning national energy policy stipulates that Solar Power Plants (PLTS) are a priority for renewable energy sources. In an effort to realize this, the Wali Barokah Islamic Boarding School in Kediri City uses PLTS as an electricity supply. The Off Grid PLTS system is a system that has been separated from the PLN source. Given this, and taking into account that every day the intensity of sunlight and the need for electrical energy are not the same, energy management and power monitoring are needed at PLTS to optimize the fulfillment of electricity needs and the effectiveness of electricity use at the Wali Barokah Islamic Boarding School, Kediri City. In this final project, the author will develop research on system management for off-grid PLTS at the Wali Barokah Islamic Boarding School, Kediri. In this study, the authors used the systems management method. Based on the results of the study, it was concluded that evaluating the characteristics of PLTS Wali Barokah Islamic Boarding School, Kediri, the number of solar panels that should have been installed was 1,900 units, while the actual number was only 636 units. This means that PLTS Barokah Kediri Islamic Boarding School must manage energy so that it can supply the load effectively.

Keywords: *PLTS Component Parameters, Energy Management System, Off Grid PLTS System*