

## **ABSTRAK**

### **RANCANG BANGUN PEMBANGKIT LISTRIK TENAGA SURYA 100WP SISTEM *OFF GRID***

**Oleh:**

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Pembangkit Listrik Tenaga Surya 100wp sistem *off grid* (PLTS) bekerja melalui Konversi Energi cahaya matahari ke energi listrik. Kebutuhan PLTS akan semakin besar karena dapat digunakan untuk berbagai keperluan, demikian dari itu dilakukan penelitian lebih lanjut mengenai perancangan dan pembuatan alat dengan sistem PLTS yang digunakan sebagai modul pembelajaran energi terbarukan bagi siswa dan siswi Sekolah Alam Lampung.

Dari hasil pengujian yang dibuat diperoleh nilai rata-rata pengukuran pada jam 11:00. Tegangan panel surya pada pengukuran tertinggi sebesar 20,70 Volt arus pengisian baterai mencapai 2,88 Ampere. Tenaga Surya (PLTS) sistem *off-grid* yang telah dirancang berfungsi normal menurut prinsip sistem *photovoltaic off-grid*.

**Kata Kunci: Energi, *Off grid* dan Panel Surya**

## **ABSTRACT**

### ***DESIGN AND BUILD 100WP SOLAR POWER PLANT WITH OFF GRID SYSTEM***

**By  
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*The 100wp Solar Power Plant off grid system (PLTS) works by converting solar energy into electrical energy. The need for PLTS will be even greater because it can be used for various purposes, thus further research is being carried out regarding the design and manufacture of tools with the PLTS system that are used as renewable energy learning modules for students at the Alam Lampung School.*

*From the results of the tests made, the average measurement value was obtained at 11:00. The solar panel voltage at the highest measurement is 20.70 Volts, the battery charging current reaches 2.88 Amperes. Off-grid solar power (PLTS) systems that have been designed to function normally according to the principle of an off-grid photovoltaic system.*

***Keywords: Energy, off grid and solar panels***