

**ABSTRACT**  
**MONITORING CURRENT AND VOLTAGE BASED ON**  
**MICROCONTROLLER WITH SMS GATEWAY IN NETWORK HIBRID**  
**DUSUN MARGOSARI KABUPATEN PESAWARAN**

**By**

**AFRIZAL FITRIANDI**

Electrical energy needs of society is increasing, but the availability of energy can not meet the needs of the community. These conditions encourage people to build their own power generation systems such as micro hydro power plant and Solar Power. The electrical energy produced by these plants depends on the nature and weather conditions, this causes the generation of energy generated is limited therefore needed a system to combine alternative power generation is becoming a network that can meet the electricity needs for the community. Incorporation generating system is called hybrid power systems, this is already done in the hamlet Margosari Pesawaran district. Hybrid alternative power plant will increase the supply of electrical energy to the load, it is necessary to monitor the current and voltage.

To facilitate the monitoring of current and voltage then made current and voltage monitoring tool based microcontroller with sms gateway. In the hybrid system, solar power plant and microhydro power plant are coupled to supply the load in Dusun Margosari Kabupaten Pesawaran, monitoring current and voltage at periodic monitoring via telecommunications networks by sms every 5 minutes.

The highest voltage before in hybrid obtained at 132 volts and 92 volts lows. After the hybrid system of the microhydro power plant and solar power plant obtained the highest voltage of 149 volts and the lowest is 98.8 volts. This condition can improve the voltage by 19%.

**Keyword : Micro-hydro power plant, Solar power plant, Hybrid power system, Dusun Margosari, Monitoring current and voltage.**