

Design of a Solar Radiation Monitoring System, Wind Speed and Wind Direction as a Microcontroller-Based Renewable Energy Potential Study

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ABSTRACT

The development of technology in the field of energy for power generation using renewable energy in Indonesia is very possible and needed. It takes a tool as a potential study in a place to get data in the form of conditions of sunlight and wind intensity that can enable electricity generation using renewable energy. Seeing and considering this, a microcontroller-based monitoring system was designed with a data logger storage method. The design of the tool consists of a wind speed sensor, a wind direction sensor, and an irradiation sensor. The parameter reading system is carried out for 24 hours with data output per second which aims to complete and accurate data in an area where a study of the potential of renewable energy will be carried out.

Keywords: Irradiation, Wind Speed, Wind Direction, Data Logger