YOGYAKARTA NEW COASTAL PLTB PERFORMANCE MONITORING PROTOTYPE BASED ON THE THINGSPEAK INTERFACE

Rino Nur Wahid
Electrical Engineering Study Program, Faculty of Science & Technology
University of Technology Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail: rinonurwahid1998@gmail.com

ABSTRACT

Electrical energy is an inseparable daily human need, and demand for energy continues to increase every year. Therefore, the development of renewable energy plants, such as wind power plants in coastal areas, is important to meet this need. Wind turbines, as a method for generating electricity from wind energy, must have their performance monitored so that they continue to operate efficiently. The aim of this final project is to create a system that can monitor generator performance parameters at the Wind Power Plant (PLTB) in real-time via the website. This project uses Nodemcu Esp8266 as the main part of the system. The PZEM-004T sensor is used to measure voltage (V), current (A), power (W), energy (kWh), frequency (Hz), and power factor (pf). In addition, an anemometer sensor is used to measure wind speed (m/s). The monitoring system created allows officers to monitor PLTB performance data via the website in real-time. Apart from that, data can also be monitored via the LCD screen. With this system, it is hoped that officers can easily monitor and manage PLTB, so that wind power plant operations become more efficient. Through this project, it is hoped that the contribution to the development of renewable energy technology will increase, and the use of wind energy sources can be optimized to meet the electricity needs of the community.

Keywords*: PLTB, Generator Performance Parameters and Wind Speed (m/s).*