

ABSTRACT

The industrial sector is a sector that has a high level of energy consumption compared to the commercial and household sectors. The most widely used energy in industry is electrical energy, so its use needs attention so that there is no waste. The implementation of Internet of Things (IoT) technology can monitor electricity usage online and real time. The system created for the above needs uses the industrial smart metering where measuring instruments are installed on each sub distribution panel. The tool designed is used to measure current, voltage, power, energy, number of units (pieces) and tonnage. The data obtained is sent via the internet network to be stored in the influxdb database and visualized online using the Grafana software. The software used are open source, so they do not require third party software. The designed system performance test is based on a predetermined equipment usage scenario. Each scenario becomes a guide to see the suitability between the required data collection and the data that can be presented by the designed system. The trial results show that this system can meet the need to measure current, voltage, power, energy, number of units (pieces (pcs) and tonnage) and is able to send data online and in real time to facilitate the monitoring of electrical energy usage.

Keyword – Electricity Monitoring, Real-time, Smart Metering