ABSTRACT

Running out of batteries in public has become a common thing, therefore the best solution is to use a backup power supply system such as a power bank, but not everyone has it because the price is quite expensive and many people are not interested in carrying it everyday. day. The charging station is one method that can be used because this system is outdoor for public use and has a capacity that exceeds that of a power bank.

In this final project an Emergency Charging Pole monitoring system is designed using sunlight received by the solar panel as an input source and then the DC voltage output will go to the charger controller, the resulting current is DC current which is then stored in the battery, then converted into AC voltage using The inverter for monitoring the output voltage system uses the PZEM-004t sensor which is connected to the ESP32 microcontroller which is connected to the internet so that it can send sensor data to the monitoring system application.

This system was successfully implemented in the Telkom University environment, right in front of the Faculty of Applied Sciences. From the results of this test, it was concluded that the Emergency Charging Pole system is helpful for mobile phone users who run out of battery, this system can also be used during the day and at night. This monitoring system has a load of 24.9W with a current of 0.2A for fast charging mobile phone users and a load of 8.6W with a current of 0.08A for cell phone users who are not fast charging. The data will be sent to the monitoring application in real time.

Keywords: *Monitoring emergency charging pole , Internet of Things,*