

# ***AUTOMATIC TRANSFER SWITCH (ATS) PROTOTYPE WITH ENERGY MONITORING AND GENSET FUEL LEVEL WEB-BASED***

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## ***ABSTRACT***

*PLN (State Electricity Company) is the main electricity supplier in Indonesia. Generally, the main source of electricity from PLN is not always supplying a continuous source of electricity, some consumers choose an alternative by providing emergency power plants such as generators with the aim of providing a continuous source of electricity. So far, the use of electrical energy in households can only be seen through the kWh meter. This study aims to produce a system that is able to control the main and backup energy source switches (Genset) automatically and can monitor the use of PLN's main energy and reserves such as generators and can monitor the generator fuel level in real-time with a Web-based basis. Based on the results of the tests that have been carried out, the overall system works well and meets all design specifications, the tool is able to function in automatic operation for load transfer from the PLN source to the generator and vice versa with voltage readings from each sensor. The percentage of voltage and current error between the sensor and the measuring instrument is 0.55% and 4.6%. With the concept of a Web-based energy and fuel level monitoring system, energy usage and fuel levels can also be monitored remotely.*

***Keywords:*** *Automatic Transfer Switch (ATS), Automatic Mains Failure (AMF), Generator Set, Monitoring, IoT.*