

ABSTRACT

Electrical energy is produced and distributed by the Indonesian State Electricity Company. However, in rural areas the majority of the grid is not energized, can utilize the Water Potential Energy for the creation of PLTMH as a source of electrical energy. Power consumption by the consumer unstable load can affect the quality of the electricity generated as frequency and voltage fluctuates. It takes a support system to get the quality of electricity in accordance with the standard PLN frequency of 50 Hz and a voltage of 220 V.

Electronic Load Controller serves to distribute power unused by the consumer load to load the complement so that all the power generated by the generator is used all the goal to stabilize frequency and voltage. In this study, conducted in laboratory testing using the generator as a substitute PLTMH uses On-Off control system using Atmega 32 Microcontroller IC as the control center and the relay as the load actuators complement.

From the test results, the system reaches the value of the reference voltage of 220 volts, the average error voltage of 8 volts and 50 Hz frequency reference values with an average error of 2 Hz.

Keyword :Genset, ELC,Load Complement, Relay