

ABSTRACT

For a building that becomes centre of human activities, for example Telkom Polytechnic, electrical energy certainly become primary need. The increases of BBM tariff that drive of the increase of electricity tariff become a consideration to be held retrenchment of the electricity at Telkom Polytechnic. Building Automation System (BAS) become one of solutions that be used to do the retrenchment. BAS automatically will control the use of electricity usage that usually caused by users careless to turn off electrical equipments after usage.

BAS is integration of Programmable Logic Controller (PLC), Human Machine Interface (HMI), and data base. PLC used as system controller and HMI used to connect user communication with system. HMI also can be used for monitoring and controlling of system work. While data base used to give report from system. System planning made according to room usage generally so that won't disturb user in using electricity. Many case that become foundations in the planning are electricity usage's efficiency with many parameters, they are time, room condition, and user need. A scenario that can be used for electricity usage controlling everyday is needed. System also gives ease for user to use electricity when there are any activities except in the hours arranged in scenario.

From the research can be conclude that BAS planned can do electricity retrenchment function by reduce unproductive hours caused by careless. It is shown by increasing of time efficiency value usage of electricity from 62,51% become 78,53%. BAS give ease for user to monitoring, controlling, and reporting in real time and historical ways.

Keyword(s) : Energy Saving, BAS, PLC, HMI.