

ABSTRACT

Energy savings became a hot issue discussed in Indonesia, especially the use of electrical energy. This is because most of the resources in the Indonesian power plant is generating electricity generated from renewable sources. Based on data obtained building spends 50 percent of total energy consumption in Indonesia and more than 70 percent of total electricity consumption. On a building, the electricity used for lighting spend 20-60 per cent of the total capacity of the building. With the amount of electricity consumption is used, it should be an effort to save the use of lights. Natural lighting sources can be utilized as much as possible and turn off lights that are not used (no activity).

This last project is one of the electrical energy saving measures especially for lighting through the prototype Lighting Control System (LCS), which uses LED sensor and PIR sensor so that it can monitor the use of lights in the room according to the needs based on the activity and the intensity of light is needed as one.

Based on the results of this experimental, LCS prototypes are built according to the design goals. The system can determine the lights with reference to the results of the monitoring room by PIR sensor and sensor LDR. The system can also turn on the lights when the room conditions require extra light. Thus the LCS prototypes can be used as an alternative to solve the problem of lighting the room.

Keywords : Lighting Control System, LED, PIR.