

## ABSTRACT

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*This study discusses the Analysis of Achievement of Efficiency in the Use of Electrical Energy at Installed Loads at SMAN 1 Manonjaya. Installed load energy conservation aims to obtain optimal operation on energy consumption without changing the function of the building. The results of observations made show that almost all of the installed loads do not meet the specified standards and have too high a power. Based on the background of this problem, this study aims to look for opportunities for energy conservation in the installed load at SMAN 1 Manonjaya. The method used is to calculate the IKE, measure the energy consumption intensity of the lighting system, measure the temperature and humidity in several rooms and measure the power of the AC, calculate the efficiency of the installed load. The results of the analysis carried out, the value of IKE in the last year was 20.86 kWh/m<sup>2</sup>/year which was included in the very efficient category according to DKI Jakarta Governor Regulation No.38 of 2012. The results of measuring the power in the lighting system were 11054.88 kWh/year, for power on the cooling system of 39643.8 kWh/year, for other loads of 54357.84 kWh/year. Conservation opportunities in this study are that the lighting system has decreased to 10363.68 or 6.25% of the previous lamp power consumption, the cooling system has decreased to 37380 or 5.71% of the previous AC power consumption and for other loads it has decreased to 12301.48 or 77.37% of the load power consumption previously.*

**Keywords:** Energy Management, Energy Efficiency, Energy Consumption Intensity (IKE), Energy Conservation, Lighting Systems, Cooling Systems