Audit Energi dan Sistem Pencahayaan SDN Penambangan 1 Kecamatan Pajarakan Kabupaten Probolinggo.

Audit of Electricity and Lighting System SDN Penambangan 1 Pajarakan District Probolinggo Regency Supervised by: Yuli Hananto, S.TP., M.Si.

> Rony Damara Study Program Renewable Energy Engineering Majoring of Technique Program Studi Teknik Energi Terbarukan Jurusan Teknik

ABSTRACT

Energy audit is an activity used to identify points of energy waste that occur in an energy utilization system, plan, analyze and recommend steps to improve energy efficiency. Energy audits can be carried out at any time or according to a predetermined schedule. Regular monitoring of energy use is a must to know the amount of energy used in each part of the operation for a certain time interval, so that savings can be made. Conducting an energy audit is the first step to start good energy management. With an energy audit, concrete data will be obtained regarding the condition of existing equipment in the building, operational costs, energy requirements, energy management used. From these data can be analyzed and identified to determine the extent to which energy saving opportunities will be achieved and the value of money that can be saved. The purpose of this study is to analyze and determine the intensity of energy consumption at SDN Penambangan 1, calculate and evaluate the consumption of electrical energy used in the SDN Penambangan 1 building and analyze the possibility that there is a waste of energy at SDN Penambangan 1. This research was conducted for 4 months from March to June, it can be seen that the value of electricity consumption intensity for March is 0.089 kWh, April is 0.05 kWh, May is 0.089 kWh and June is 0.089 kW h with an area of $1,100m^2$. The IKE standard for non-air-conditioned buildings is less than 3.4 kWh/m2/month. The calculation results obtained an IKE value of 0.08 kWh/m2/month, so the level of efficiency in the use of electrical energy at SDN Penambangan 1 is in the very efficient category according to the IKE standard.

Keywords: Energy Audit, Energy Consumption Intensity, SDN Penambangan 1