

***ENERGY AUDIT AND SAVING OPPORTUNITIES AT HAPPY BAKERY  
AND CAFE KRAKSAAN PROBOLINGGO***

*Supervisor: Siti Diah Ayu Febriani, S.Si., M.Si*

***Achmad Mansur***

*Renewable Energy Engineering Study Program*

*Engineering Department*

***ABSTRACT***

*Unbalanced use of electrical energy and unlimited use of electrical energy increases electricity consumption so that it is necessary to control electricity use. In this situation, to overcome excessive electricity use and increasing electricity payments, energy efficiency is needed, namely using energy conservation methods. As is the case with Happy bakery and cafe as one of the buildings that uses electrical energy for daily activities such as fitness, cafe, bakery and restaurant with a land area of 600 m<sup>2</sup> consisting of 2 floors which needs to be audited so that the use of electrical energy is more efficient. The aim of this research is to analyze energy saving opportunities and analyze electrical energy saving opportunities. Happy Bakery and Cafe use electricity sources from the State Electricity Company (PLN with 66KVA/6,600VA power which is included in the B2 tariff group. This research uses quantitative methods by processing primary and secondary data that has been collected. Primary data includes data on active power, light intensity (Lux), and the area of each room. Then the data is processed by calculating the Energy Consumption Intensity (IKE) for each room, which is then compared with the applicable standards. Based on the research results, it can be seen that the electrical energy consumption of the room under study is 12,972 kWh/month with a building area of 1436.26 m<sup>2</sup> and obtained an energy consumption intensity (IKE) value of 9.03 kWh/m<sup>2</sup> which is classified as efficient according to SNI 6196:2011.*

*Keywords: Energy Audit, IKE, Energy Conservation, Energy Savings*