

ABSTRACT

Public awareness to save electrical energy is still low. Excessive and inappropriate use of electricity often occurs among people, such as forgetting to turn off lights that are not used, turning on excessive AC and much more. Moreover, electrical energy is a primary need for every human being where every activity cannot be separated from electrical energy. The supply of electrical energy is also increasingly limited because it comes from non-renewable resources. Therefore, it is necessary to make efforts that can support the supply of electrical energy optimally.

In this final project, the authors design an application that can regulate and manage electricity usage more efficiently and effectively, which can regulate any usage restrictions that can be reduced. With this application, it is expected that the use of electrical equipment can be limited according to the schedule that adjusts to the costs that have been determined at the beginning

The results or benefits obtained from this research are expected to help the community in minimizing the cost of paying for electrical energy using the K-Nearest Neighbor method. By using the optimal value of K, which is using $K = 5$ according to the results obtained from the test and from the results of the test the execution time gets an average of 10.94 seconds, and system testing with a 100% accuracy level obtained from this alpha test shows that the system that has been designed runs perfectly.

Keywords: *Energy Saving, K-Nearest Neighbor, Scheduling Device*